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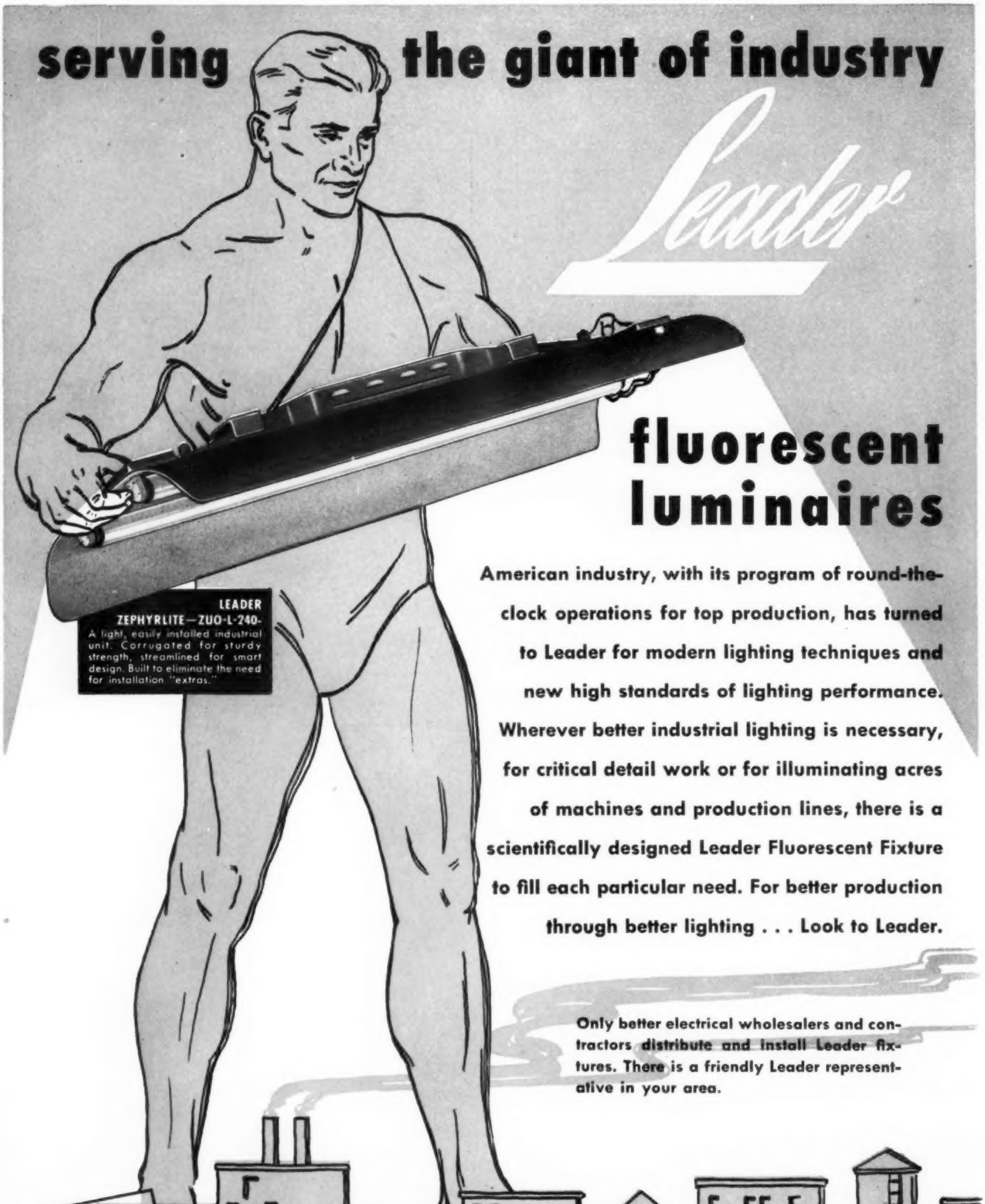
ELECTRICAL WHOLESALING

FORMERLY WHOLESALER'S SALESMAN

THE NATIONAL MAGAZINE FOR SALESMEN OF ELECTRICAL PRODUCTS

APRIL · 1947

1947 CONVENTION NUMBER



serving the giant of industry

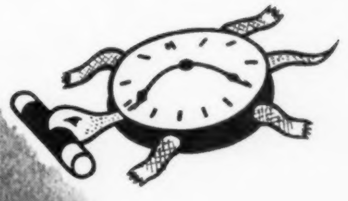
LEADER
ZEPHYRLITE—ZUO-L-240-
A light, easily installed industrial unit. Corrugated for sturdy strength, streamlined for smart design. Built to eliminate the need for installation "extras."

fluorescent luminaires

American industry, with its program of round-the-clock operations for top production, has turned to Leader for modern lighting techniques and new high standards of lighting performance. Wherever better industrial lighting is necessary, for critical detail work or for illuminating acres of machines and production lines, there is a scientifically designed Leader Fluorescent Fixture to fill each particular need. For better production through better lighting . . . Look to Leader.

Only better electrical wholesalers and contractors distribute and install Leader fixtures. There is a friendly Leader representative in your area.

LEADER ELECTRIC COMPANY
6121 NORTH BROADWAY • CHICAGO 40, ILLINOIS
WEST COAST FACTORY—2040 LIVINGSTON STREET, OAKLAND 6, CALIF.



ECONOMY
DELAY
PAT. PEND.
200 AMPS
250 VOLTS
UND. LAB. INSP.
UND. LAB. INSP.
ECONOMY
DELAY
PAT. PEND.
250 VOLTS

SUPERIOR PROTECTION

. . . where "TIME-DELAY" is needed most!

With a reputation for Pioneering and Constant Improvement, ECONOMY has always made its Renewable Fuses and Renewal Fuse Links to meet the *maximum* of all requirements of "The Standard for Fuses".

—And we are now proud to announce ECONOMY *"Time-Delay" Renewal Links*, that offer superior protection where time delay is needed most—within the 135% and 200% range in which most overloads occur.

Because of the simplicity and unusually fine mechanical construction of ECONOMY Fuses and *"Time-Delay"* Renewal Links, renewal is quick and easy.

See your Electrical Wholesaler for the new ECONOMY *"Time-Delay"* Fuses and Links; he has them in stock.

SEND FOR NEW CATALOG

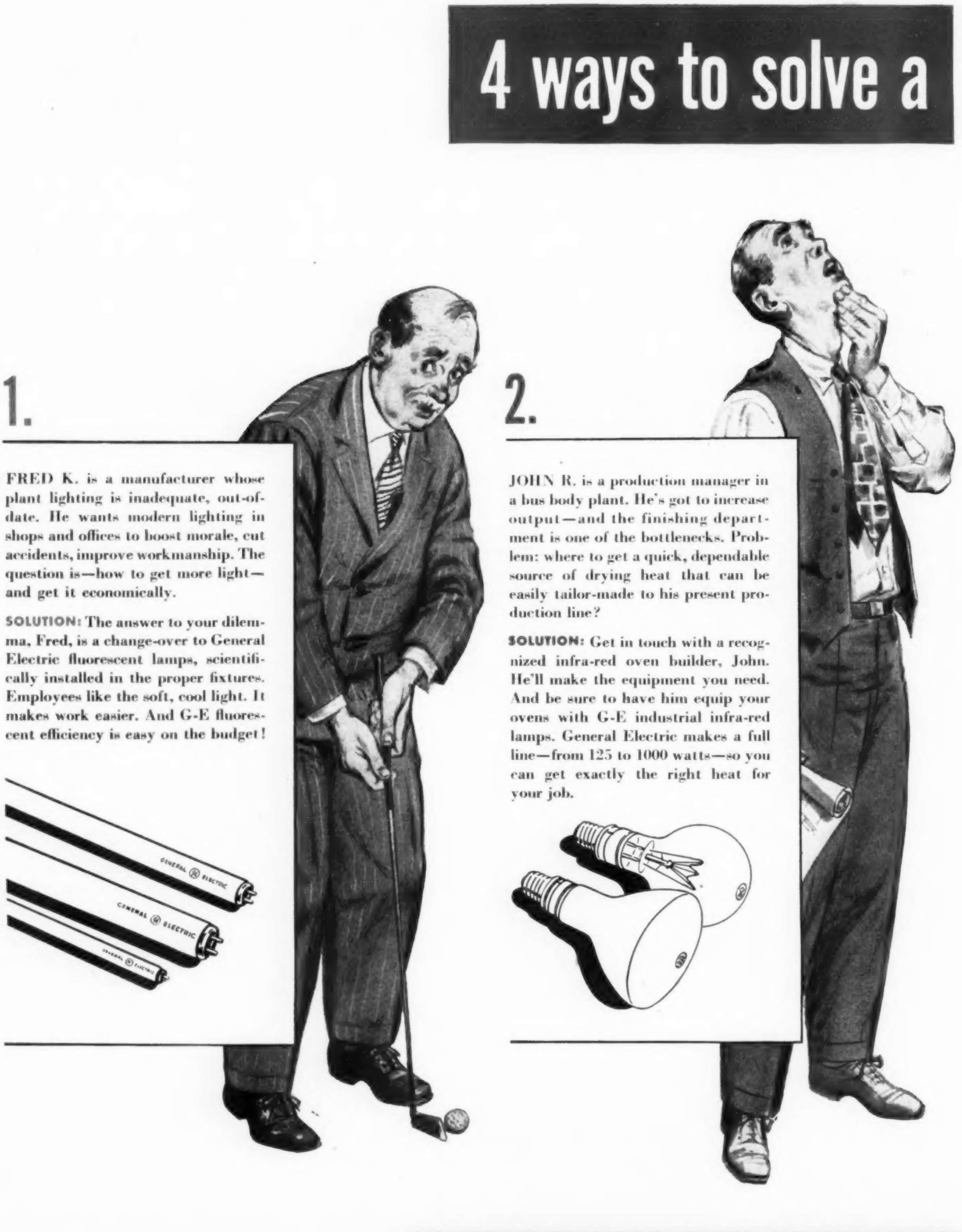
ECONOMY DE-LAY

RENEWABLE CARTRIDGE FUSES

ELECTRICAL WHOLESALERS . . . Men who Buy and Specify Fuses are Rapidly Learning About the Superior Protection ECONOMY *"Time-Delay"* Renewable Cartridge Fuses offer . . . Their advantages are being featured in ads like these appearing in magazines having a circulation of over 200,000. Be Ready for This Growing Demand!

2203

ECONOMY FUSE AND MFG. CO., 2717 GREENVIEW AVE., CHICAGO 14, ILLINOIS REPRESENTATIVES IN ALL PRINCIPAL CITIES



4 ways to solve a

1.

FRED K. is a manufacturer whose plant lighting is inadequate, out-of-date. He wants modern lighting in shops and offices to boost morale, cut accidents, improve workmanship. The question is—how to get more light—and get it economically.

SOLUTION: The answer to your dilemma, Fred, is a change-over to General Electric fluorescent lamps, scientifically installed in the proper fixtures. Employees like the soft, cool light. It makes work easier. And G-E fluorescent efficiency is easy on the budget!

2.

JOHN R. is a production manager in a bus body plant. He's got to increase output—and the finishing department is one of the bottlenecks. Problem: where to get a quick, dependable source of drying heat that can be easily tailor-made to his present production line?

SOLUTION: Get in touch with a recognized infra-red oven builder, John. He'll make the equipment you need. And be sure to have him equip your ovens with G-E industrial infra-red lamps. General Electric makes a full line—from 125 to 1000 watts—so you can get exactly the right heat for your job.

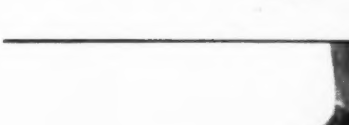
Whatever lamps you need

lamp problem

3.

STANLEY McD. is a plant superintendent who's worried about the lighting in his company's foundry, a big high-bay shop. He wants to double the light on working areas—but he doesn't want to add to the present number of fixtures because maintenance is difficult.

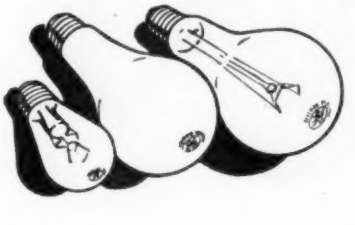
SOLUTION: G-E mercury lamps are right up your alley, Stanley. They're ideal where high mounting height is involved, because they provide a concentrated light source—only a few fixtures are needed to produce plenty of light. Better ask your G-E Lamp supplier about that 3000-watt lamp!

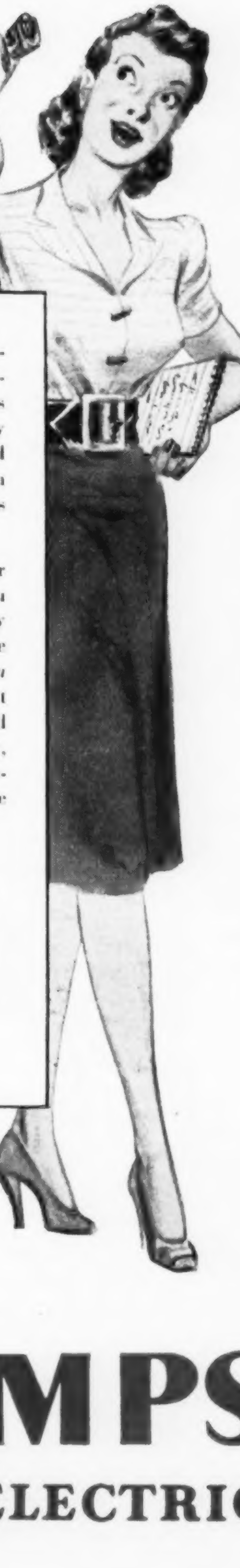


4.

MISS BETTY JANE L. is the charming secretary of an industrial purchasing agent. She knows the boss buys umpty-ump types of lamps for every department of the company—and that he hates to dicker with a dozen different suppliers to get the lamps he needs.

SOLUTION: You'll pave the way for that next raise, Betty Jane, if you remind the boss that he can buy every lamp he needs from one source—because *General Electric makes 'em all*—from standard G-E filament lamps to lamps for every specialized use. And he can be sure of quality, because General Electric Lamp research is constantly at work to make G-E lamps *Stay Brighter Longer!*



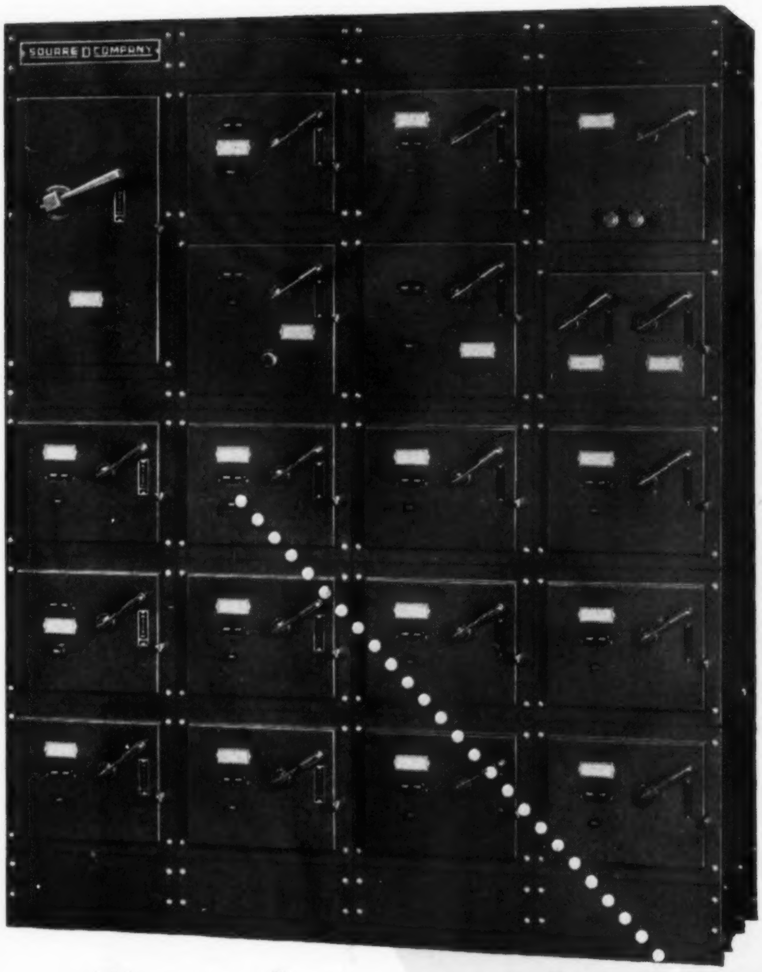


...G-E makes 'em all

G·E LAMPS

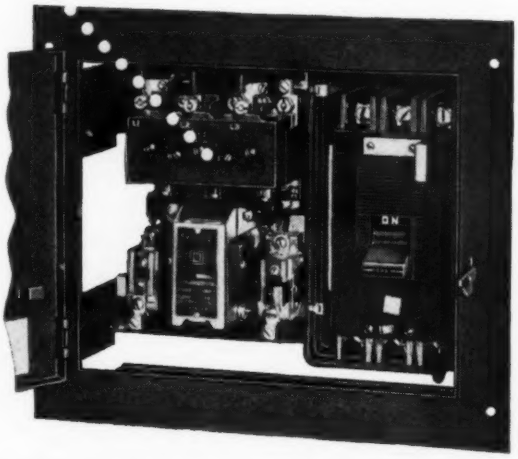
GENERAL ELECTRIC

A PART OF SQUARE D's PARADE OF NEW DESIGNS



Here is a good reason for specifying

Square D CONTROL CENTERS



- Control centers permit low-cost grouping of starters in favorable locations. They offer the basic advantages of attractive appearance, compactness, easy installation, convenient maintenance and adaptability to future change or expansion.

You get better performance in Square D Control centers because each of the basic advantages is greatly increased by the time-proved design and operation of Square D Starters plus the inherent value of Circuit Breaker protection.

Call your nearby Square D Field Engineer for complete details.

SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

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FORMERLY WHOLESALER'S SALESMAN

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CHANGE OF ADDRESS

Director of Circulation, Electrical Wholesaling
330 West 42nd Street, New York 18, N. Y.

Please change the address of my Electrical Wholesaling subscription.

Name ....

Old Address ....

New Address ....

New Company Connection ....

New Title or Position ....

Haunted by Muddled Battery Inventory?
"B" BATTERY
BATTERY

Simplify your stock with one complete line—"EVEREADY" RADIO BATTERIES!

IT'S GOOD BUSINESS to concentrate your selling . . . to get your biggest volume on the line that moves without resistance.

"Eveready" radio batteries carry an unexcelled name and reputation; more customers ask for "Eveready" batteries than any other brand. And "Eveready" radio batteries fit virtually all makes of sets; you freeze less capital, and please more customers, when you specialize on these famous power units!

There's no need to be haunted by the nightmare of slow-moving, private-label battery brands—wake up to the profit opportunities in "Eveready" brand radio batteries!

The registered trade-marks "Eveready" and "Mini-Max" distinguish products of National Carbon Company, Inc.

EVEREADY
TRADE-MARKS
MINI-MAX
RADIO BATTERIES

NATIONAL CARBON COMPANY, INC.
30 East 42nd Street, New York 17, N. Y.
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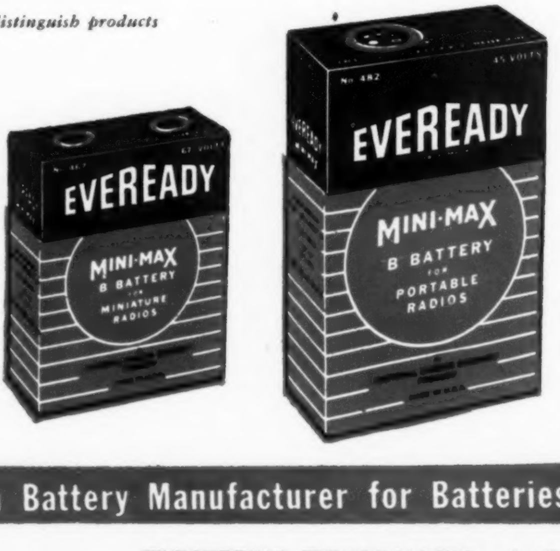
EVEREADY
MINI-MAX
B BATTERY
FOR
MINIATURE RADIOS
No. 482
45 VOLTS
EVEREADY
MINI-MAX
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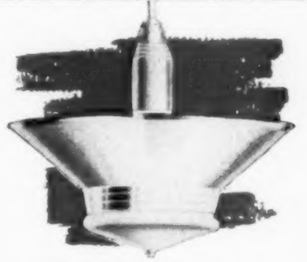
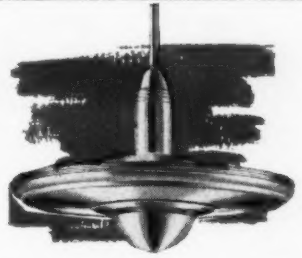
FOR
PORTABLE RADIOS

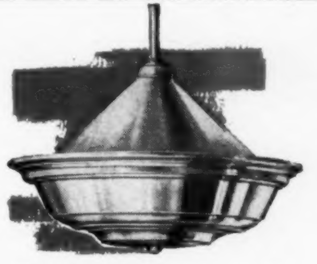
Go to a Radio Manufacturer for Radios — a Battery Manufacturer for Batteries!



SUPER-ILLUMINATORS, smartly designed, efficient, Indirect Luminaires with luminous glass bowl and softly lighted exterior. (3-sizes.)



WINDSOR—Provides wide light-distribution of Indirect Lighting with pleasant bottom light-spill. Excellent for low-ceilings. (2-sizes.)



OPTILUX—Enclosed Indirect with low-brightness glass reflector-cover. Ideal for Schools and Hospitals. (2-sizes.)

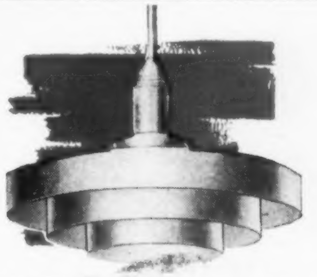
NOW A Definite Line of Guth INCANDESCENTS

Although Fluorescent Lighting makes up by far the major portion of our business today, we are nevertheless, producing a great many Incandescent Lighting Fixtures as well. The demand for Incandescent Fixtures is still excellent. Illustrated here are a few of the many types of GUTH Incandescent Fixtures included in the complete line. Our Catalog 44-A illustrates and describes a wide variety of types and sizes. Our current policy is to confine production strictly to the items shown in Catalog 44-A. We are not producing any other types shown in earlier catalogs. By so doing, we can assure you of better production and delivery schedules than would otherwise be possible. Write for Catalog 44-A today. It includes the full line of present day GUTH Fixtures . . . both Fluorescent and Incandescent.

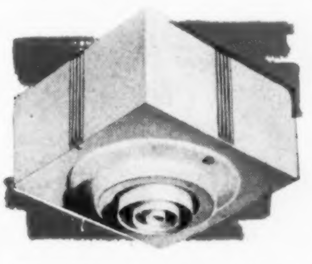
OUR
45th
ANNIVERSARY
YEAR

THE EDWIN F. GUTH CO.
ST. LOUIS
Leaders in Lighting Since 1902

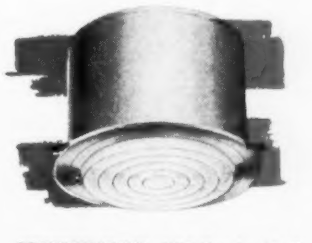
Guth



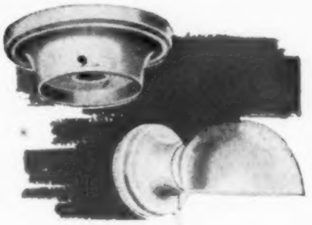
"THREE RING SB"—Totally Indirect Luminaire for Silver Bowl Lamps affords good maintenance. (2 sizes in 2 types.)



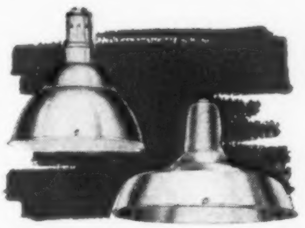
HYLITERS—Recessed and Surface types for Projector Lamps (PAR 38). Can be used as individual units, or in conjunction with our Fluorescent types.



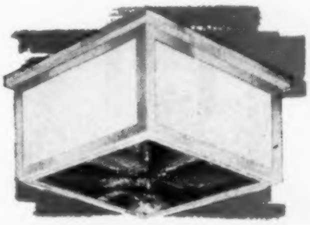
RECESSED UNITS—With Genuine Alzak reflector. In 2 sizes. Various bottoms include: Open, flat sanded-glass, Louvre Lens, Concentric Louvres, Wire Guard, etc.



AGLITES AND FLANGES—Aglites are high quality all-around utility units; Flanges have self-adjusting spring glass-holders. Both are formed of steel and finished 300° White Enamel.



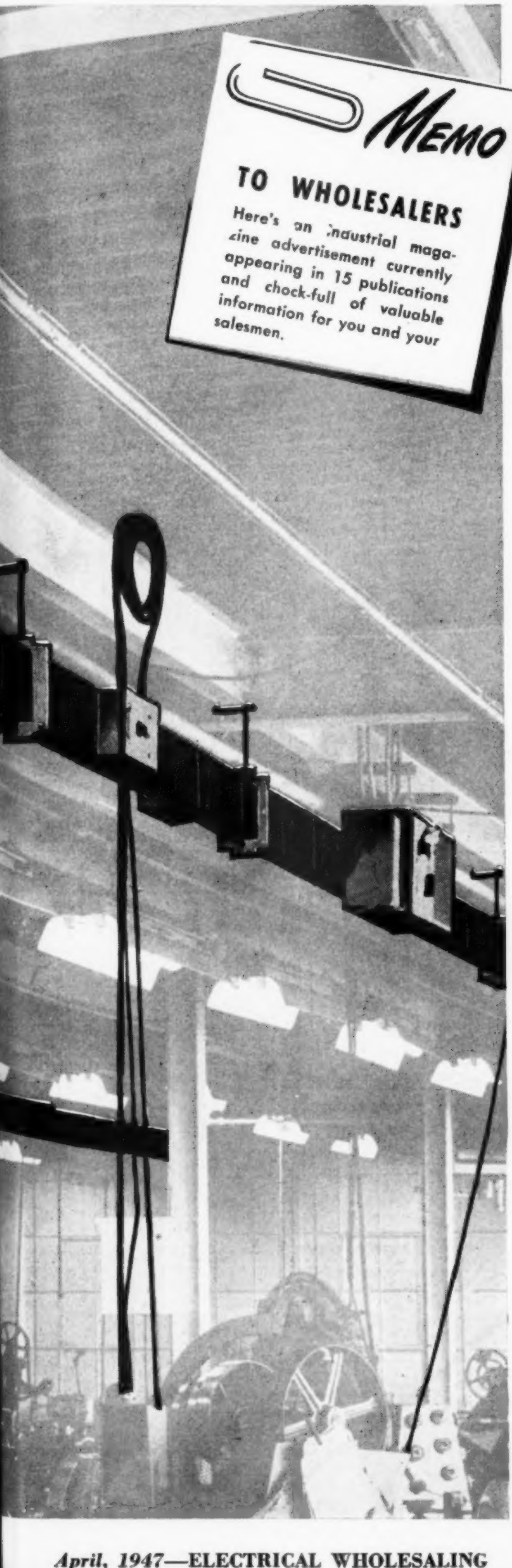
INDUSTRIAL REFLECTORS—Dome and High Bay reflectors. Four Dome sizes and 9 High Bay Types. All made of Alzak Aluminum.



PRISMATIC LENS UNITS — Recessed and Surface types with heat-resistant PYREX lenses. Surface type has opal glass sides.

Why shut down to

move one machine?



MEMO

TO WHOLESALERS

Here's an industrial magazine advertisement currently appearing in 15 publications and chock-full of valuable information for you and your salesmen.

DO YOU reach for the red ink when machines must be moved? Do you watch production take a dive because a whole line must be shut down to tap in one machine? And do you wince at the cost of rewiring whenever a shop set-up is changed?

Then get acquainted with BullDog BUStribution DUCT and the multiple advantages of plug-in power that covers your whole plant.

Every ten-foot section of this modern electrical feeder system has ten convenient outlets. All your electrician has to do when a machine is moved is raise the plug to the nearest outlet, snap its contact fingers over the bus bars and bolt the plug to the casing. He can do it in twelve minutes, or less.

A single machine, or a dozen, can be relocated with no delays for new wiring . . . no interruption of power for the rest of the line.

Because it's built in standardized, prefabricated sections, BullDog BUStribution DUCT can be dismantled, moved and reinstalled in new locations or new combinations without the loss of so much as a single bolt.

A telephone call to your nearby BullDog Field Engineer will bring full technical information on this flexible, economical system of power distribution. Call today, or write BullDog direct for descriptive folders.

• • •

BullDog manufactures Vacu-Break Safety Switches—SafToFuse Panelboards—Superba and Rocker Type Lighting Panels—Switchboards—Circuit Master Breakers—"Lo-X" Feeder BUStribution DUCT—"Plug-in" Type BUStribution DUCT—Universal Trol-E-Duct for flexible lighting —Industrial Trol-E-Duct for portable tools, cranes, hoists.

BULLDOG

ADEQUATE WIRING SERVES AND SAVES

ELECTRIC
PRODUCTS
COMPANY

BEPCO

DETROIT 32, MICHIGAN
FIELD OFFICES IN ALL PRINCIPAL CITIES
In Canada: BULLDOG ELECTRIC PRODUCTS OF CANADA, LTD., TORONTO

The Cutler-Hammer

TYPE MO 4 MULTI-BREAKER

Small size
4 poles
Thermal-Magnetic trip
Easy to install
and wire.

Cutler-Hammer Engineered and
Manufactured to Cutler-Hammer
Standards of Dependability.

This new small size Multi-Breaker measures only 5″ x 7″, yet has 4 poles, with circuit ratings of 15, 20, 30 amperes, and has thermal and magnetic trip heretofore found in industrial type Multi-Breakers. The magnetic trip operates instantly on short circuits. The thermal trip holds on harmless overloads.

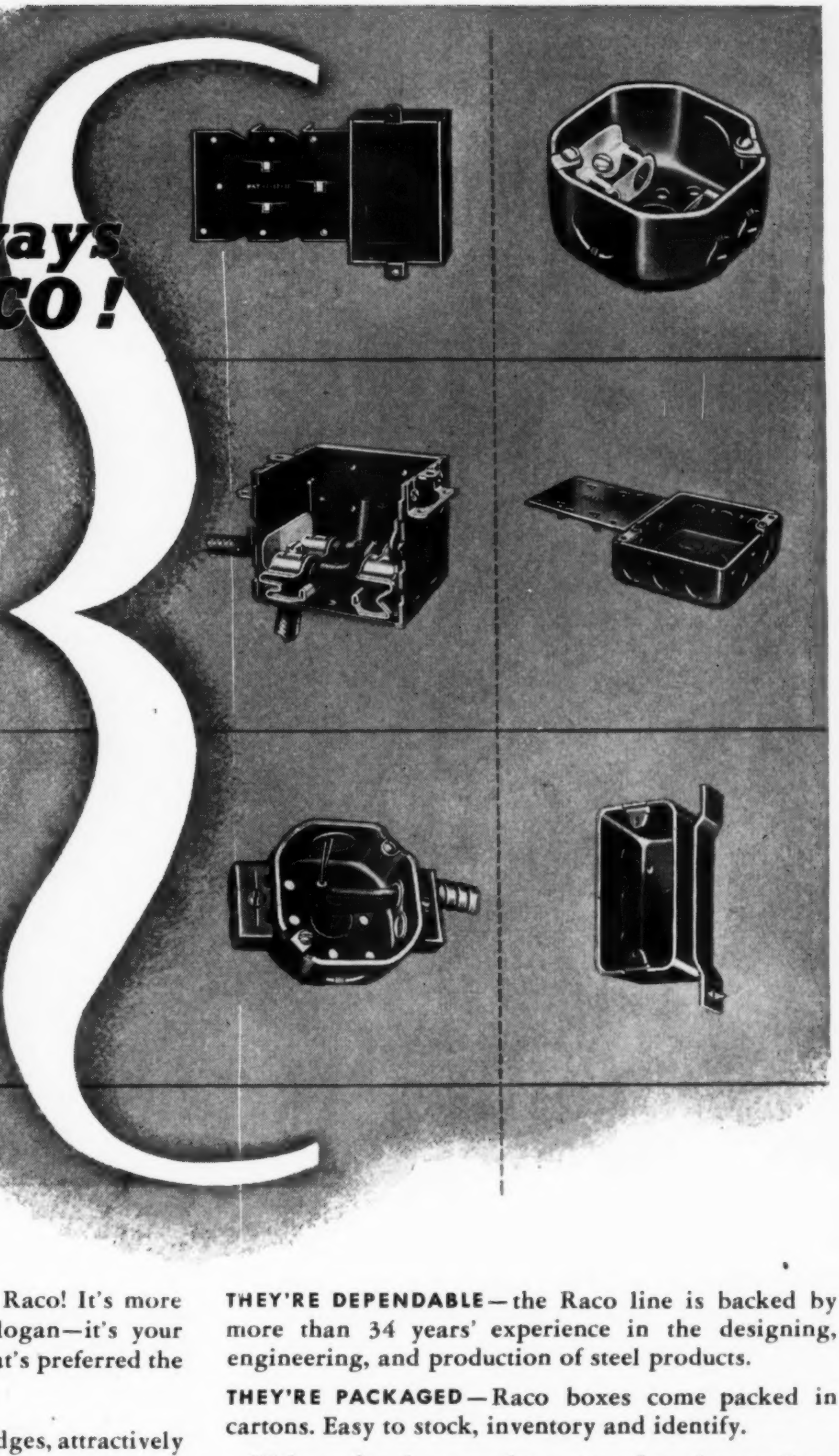
The two top or two bottom poles can easily be connected for double pole circuits by using the tie bars provided.

The Cutler-Hammer MO 4 Multi-Breaker is available for flush or surface mounting. It is engineered and manufactured throughout to world famous Cutler-Hammer standards making it unusually rugged and dependable.

There is a wide market for the Cutler-Hammer MO 4 Multi-Breaker in new housing of every type, stores, homes, offices, factories, schools and shops. In some cases the MO 4 can be used as a service entrance switch, in other cases as load center protection. Feature and show the Cutler-Hammer MO 4 Multi-Breaker at every opportunity. CUTLER-HAMMER, Inc., 1425 St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MULTI-BREAKER
C-H

You Can Always Rely on RACO!



RACO

SWITCH BOXES
OUTLET BOXES

Many other types
also available . . .
A BOX FOR EVERY NEED

Remember, you can always Rely on Raco! It's more than a catch-phrase, more than a slogan—it's your positive assurance of a quality line that's preferred the country over! And, here's why:

THEY'RE CLEAN—no ragged or rough edges, attractively finished!

THEY'RE UNIFORM—every Raco product is made to the same exact measurements.

THEY'RE DEPENDABLE—the Raco line is backed by more than 34 years' experience in the designing, engineering, and production of steel products.

THEY'RE PACKAGED—Raco boxes come packed in cartons. Easy to stock, inventory and identify.

Write today for your free copy of catalog on Raco products. It's the quality line, the dependable line, the line that you and your salesmen can sell with pride and profit—today—tomorrow—and for many years ahead.

ALL-STEEL EQUIPMENT, INC.
300 Kensington Ave., Aurora, Ill.

RACO
ALL-STEEL PRODUCTS

A Complete Line of Switch and Outlet Boxes

ALL-STEEL EQUIPMENT, INC.

THEY GO A **LONG**
WAY TO MAKE
FRIENDS

Properly gauged, carefully chamfered, perfectly reamed, rigidly inspected . . . every step of the way Conduit Pipe Products go just a little farther to insure customer satisfaction. If you want to make lasting friends of your contractor customers, sell them the trouble-free starting and satisfactory performance of Conduit Pipe Products.

REPRESENTATIVES IN PRINCIPAL CITIES

Conduit PIPE PRODUCTS CO.
COLUMBUS, OHIO

PIPE COUPLINGS PIPE NIPPLES ELBOWS, 90° AND 45°
RUNNING THREAD PIPE GOOSENECKS WALLPLATES

UNITED STATES RUBBER COMPANY

SERVING THROUGH SCIENCE

a modern new wire

This new building wire, in the branch circuit sizes, is finished in nylon and is called "Neolay."

It's the smallest diameter, lightest weight building wire on the market. The nylon-smooth finish and small diameter facilitate installation.

Laminated walls of Laytex (90 per cent pure rubber) insulation give high dielectric strength. On top of the Laytex is a layer of flame retardant Neoprene.

The larger sizes—No. 6 AWG to 1,000,000 CM—are supplied with an aluminum conductor, RH insulation and a Neoprene jacket. This construction provides a cable that is unusually tough and strong, and exceedingly light.

Investigate! Write United States Rubber Company, Wire and Cable Department, 1230 Avenue of the Americas, New York 20, N. Y.

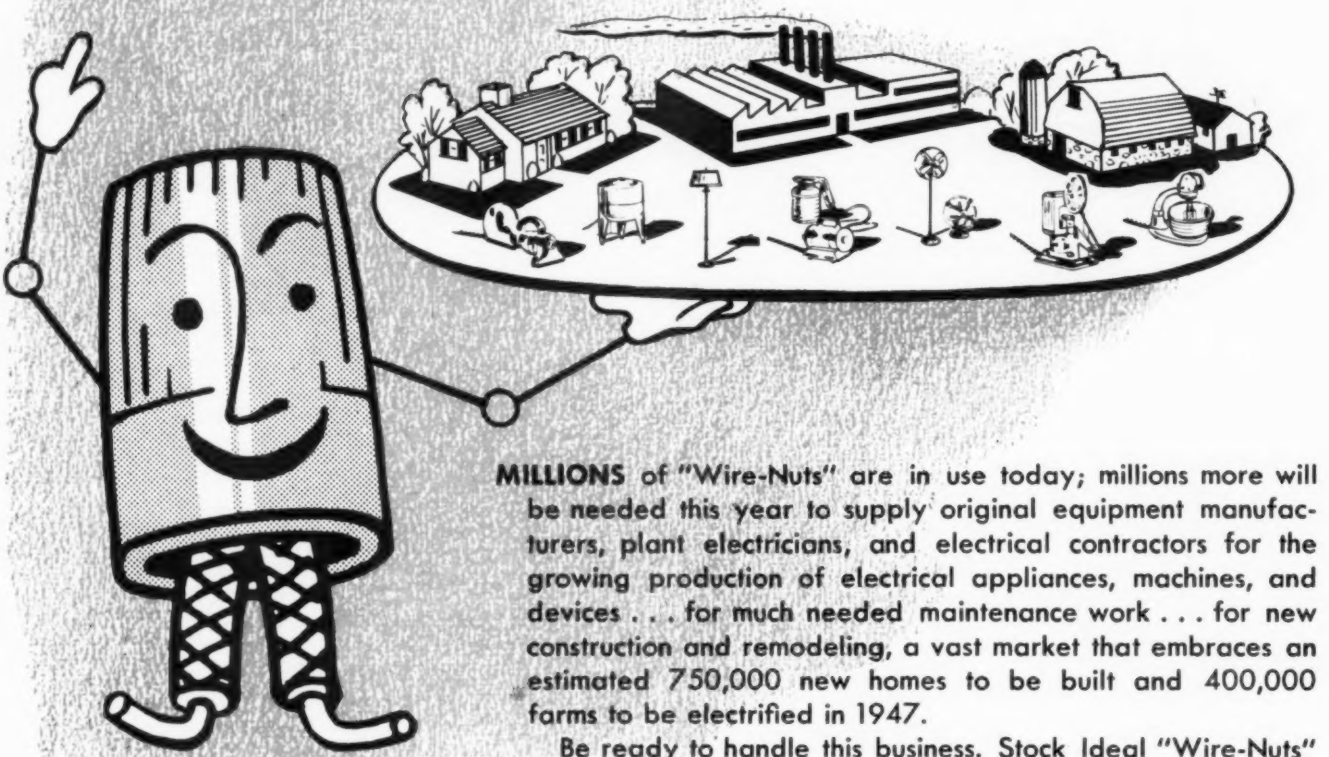
Neolay

Reg. U. S. Pat. Off.

ELECTRICAL WIRES & CABLES

UNITED STATES RUBBER COMPANY · TRADE MARK ·

Help Yourself to



MILLIONS of "Wire-Nuts" are in use today; millions more will be needed this year to supply original equipment manufacturers, plant electricians, and electrical contractors for the growing production of electrical appliances, machines, and devices . . . for much needed maintenance work . . . for new construction and remodeling, a vast market that embraces an estimated 750,000 new homes to be built and 400,000 farms to be electrified in 1947.

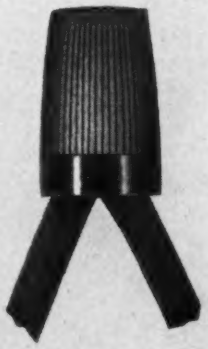
Be ready to handle this business. Stock Ideal "Wire-Nuts" in sufficient quantities to fill large orders immediately. Tie in with Ideal's big "Wire-Nut" promotion program. It's headed for success—go along with it! Write for full details *now.*

the IDEAL SET-UP

for Big Volume, Easy-to-Get, Quick

PROFITABLE SALES

● **You can recommend Ideal "Wire-Nuts" with confidence—because they give performance plus and are precision-built for satisfactory service. Rigidly tested. Listed by Underwriters' Laboratories, Inc., and other leading electrical authorities.**



IDEAL

IDEAL INDUSTRIES, Inc.
Successor to Ideal Commutator Dresser Co.
1047 Park Avenue Sycamore, Illinois

Distributed Through
AMERICA'S LEADING
WHOLESALERS

GREATER PROFITS...

FROM THIS HUGE MARKET

for IDEAL Wire-Nuts*

(THE SOLDERLESS, TAPELESS WIRE CONNECTORS)

**EASY TO SELL—
EASY TO USE—**

That's Why There's Such a Tremendous Demand Everywhere . . .

SCREWS ON—LIKE A NUT ON A BOLT!

One simple operation makes a connection that's better electrically, stronger mechanically—no solder, no tape.

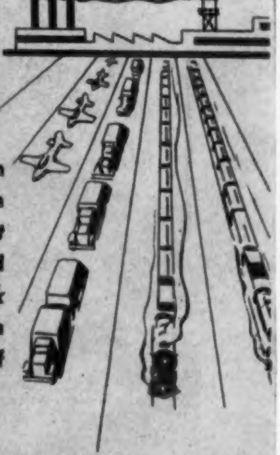
Where there's a wire connection, there's prospect for Ideal "Wire-Nuts", the solderless, tapeless wire connectors that make better connections at less cost. More than 300 million wire connections will be used in producing 20 major groups of electrical products—refrigerators, ironers, radios, fluorescent fixtures, etc.—more than 50 million in new home construction, almost 30 million in REA improvements. These big orders will go to the alert wholesalers who aggressively sell the electrical contractors, plant electricians, electrical equipment and machinery manufacturers in their territory. Go after your share of this tremendous "Wire-Nut" business. Get complete information—write now!

* Trade Mark Reg. U. S. Pat. Office

PROMOTION

● Complete in every detail . . . consistent schedule of ads in leading trade papers . . . direct mail . . . display materials...*samples* for your customers...attractive packages—*all* designed to direct business to YOU.

PRODUCTION



● *Immediate Delivery.* Production of Ideal "Wire-Nuts" has been greatly increased. *You can get stocks NOW!* Order at once and be in a position to cash in *quick* on the Ideal Promotion Program by assuring your customers of immediate delivery.

Complete Your Circuit to Bigger Sales and Profits NOW!

Get the whole story—ask for full particulars about Ideal "Wire-Nuts"—the Product . . . the Promotion . . . the Production. Write today. No obligation.

ANNOUNCING..... a new stock line of CONTROL and POWER CIRCUIT TRANSFORMERS

with these important features:

- Over 50 units with ratings carefully selected to serve a wide range of useful applications.
- Designed and manufactured by a concern with over 18 years of experience in filling the most exacting requirements of the electrical-electronics industry.
- Conservatively rated and quality built for long life and dependable service. Mountings allow easy installation.
- Meet all requirements of the Underwriters' Laboratories for their respective classifications.

HCO SERIES
NCF SERIES

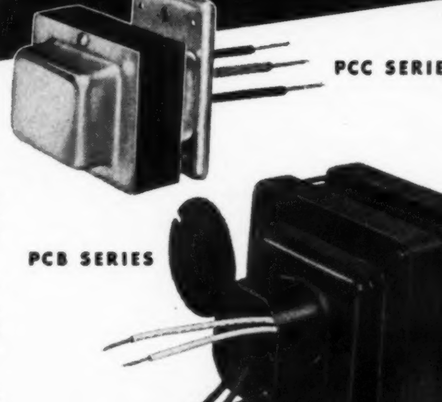
CONTROL TRANSFORMERS

For utilizing 115-volt power to operate any of a multitude of low-voltage devices, among them relays, solenoids, alarms, signal lamps, and small motors in various home and industrial applications.

HCO SERIES: High reactance types, 25 or 30-volt secondaries, each in capacities of 20, 30, 40 and 60 VA. Mounted on square outlet box covers that fit 4" square boxes, 3¼" and 4" octagon boxes.

HCF SERIES: Same ratings as HCO Series, but provided with standard mounting feet as shown for NCF Series.

NCF SERIES: Normal reactance types with 8, 16, 24 or 32-volt secondaries, capacities ranging from 25 to 150 VA.



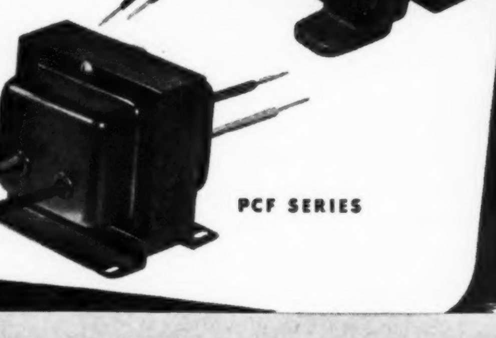
POWER CIRCUIT TRANSFORMERS

For stepping down low-rate 230, 460, or 575-volt power in industrial plants as an economical means of operating 115-volt lighting, controls, and various other supplementary devices at machines.

PCF SERIES: A range of units including those with 230-volt and 460-volt primaries in 25 and 50 VA capacities, with 230/460 and 575-volt primaries, each in capacities from 75 to 250 VA. Have insulated leads for in-compartment wiring.

PCB SERIES: Units have either 230/460 or 575-volt primaries, capacities ranging from 500 VA to 10 KVA. Fitted with outlet boxes made to receive conduit or armored cable.

PCC SERIES: Have either 230, 230/460, or 460-volt primaries and capacities of 75, 100 or 150 VA. Fitted to rectangular covers for mounting on FS or FD-type conduit boxes. Provided with fuse blocks for overload protection.

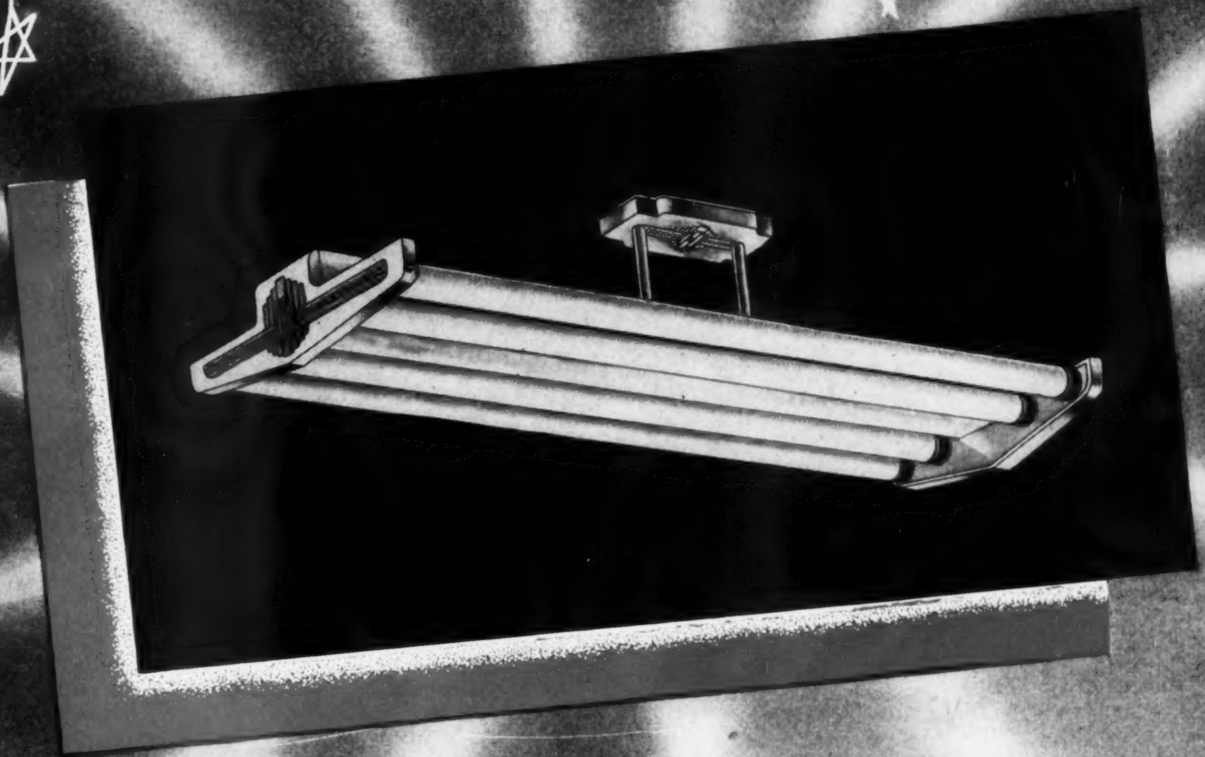


WRITE FOR CATALOG AND PRICE LIST

CHICAGO TRANSFORMER

DIVISION OF ESSEX WIRE CORPORATION

3501 ADDISON STREET • CHICAGO 18, ILLINOIS



OUTSTANDING

● For smartness, distinction and refreshingly different designs of modern beauty—the new series of popular priced General Day-Lite fluorescent lighting units will truly represent the ultimate in style and value . . . This group of unusual creations will have instant appeal to the value-wise and style-minded. To the sales-minded, it will assure peak volume possibilities.

Like all General Day-Lite units, these too will bear the Manufacturers & Assemblers A. F. of L. Union Label.

General DAY-LITE COMPANY
Manufacturers FLUORESCENT LIGHTING *Fixtures*
Phone: NORRISTOWN 7500
NORRISTOWN PA.

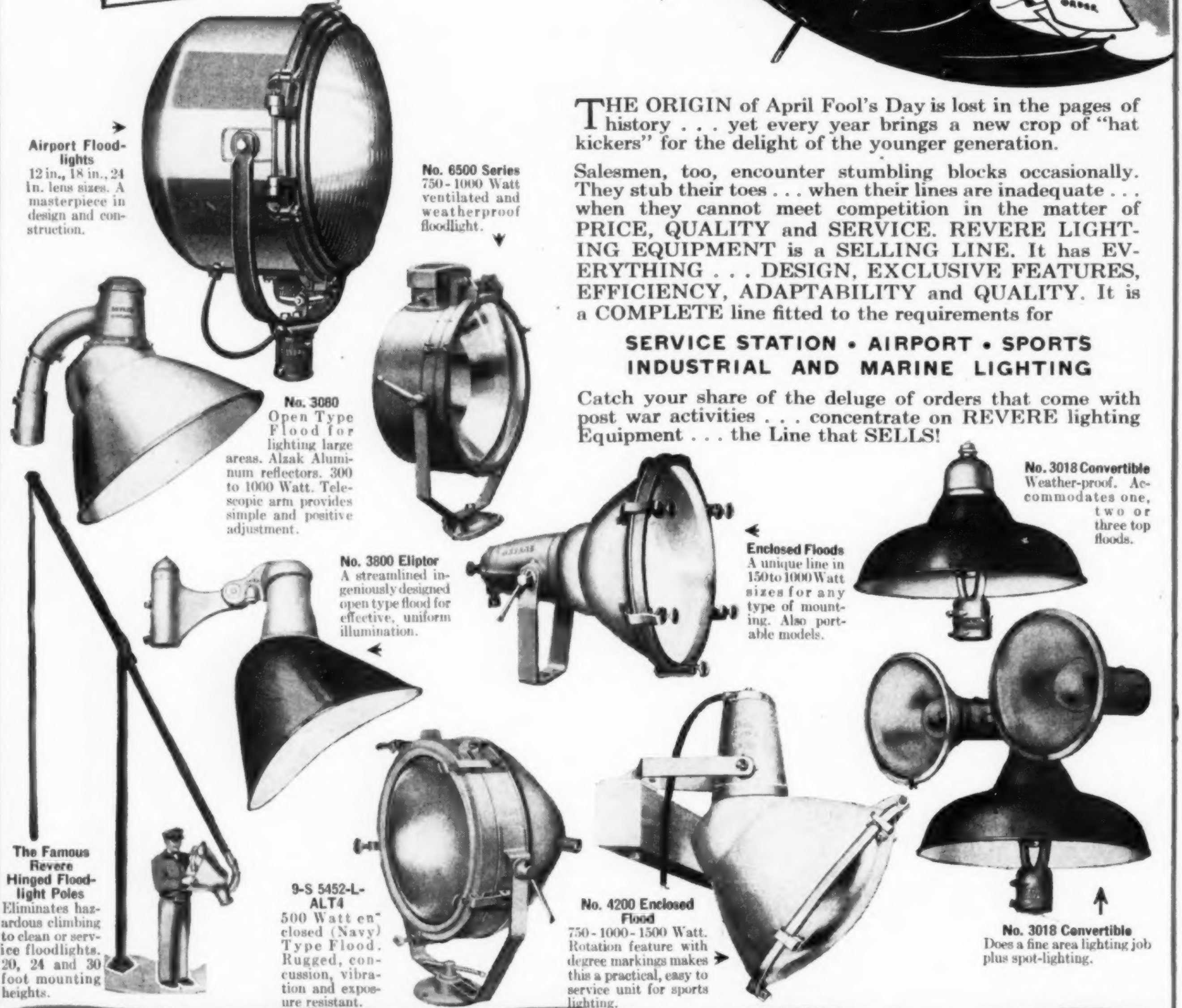
APRIL
No Fooling
MAKE IT YOUR MONTH
of SALES SHOWERS
WITH THE Revere LINE
ELECTRIC MFG. CO. CHICAGO, U.S.A.
ORDER

THE ORIGIN of April Fool's Day is lost in the pages of history . . . yet every year brings a new crop of "hat kickers" for the delight of the younger generation.

Salesmen, too, encounter stumbling blocks occasionally. They stub their toes . . . when their lines are inadequate . . . when they cannot meet competition in the matter of PRICE, QUALITY and SERVICE. REVERE LIGHTING EQUIPMENT is a SELLING LINE. It has EVERYTHING . . . DESIGN, EXCLUSIVE FEATURES, EFFICIENCY, ADAPTABILITY and QUALITY. It is a COMPLETE line fitted to the requirements for

SERVICE STATION • AIRPORT • SPORTS
INDUSTRIAL AND MARINE LIGHTING

Catch your share of the deluge of orders that come with post war activities . . . concentrate on REVERE lighting Equipment . . . the Line that SELLS!



Airport Floodlights 12 in., 18 in., 24 In. lens sizes. A masterpiece in design and construction.

No. 6500 Series 750 - 1000 Watt ventilated and weatherproof floodlight.

No. 3080 Open Type Flood for lighting large areas. Alzak Aluminum reflectors. 300 to 1000 Watt. Telescopic arm provides simple and positive adjustment.

No. 3018 Convertible Weather-proof. Accommodates one, two or three top floods.

Enclosed Floods A unique line in 150 to 1000 Watt sizes for any type of mounting. Also portable models.

No. 3800 Eliptor A streamlined ingeniously designed open type flood for effective, uniform illumination.

The Famous Revere Hinged Floodlight Poles Eliminates hazardous climbing to clean or service floodlights. 20, 24 and 30 foot mounting heights.

9-S 5452-L-ALT4 500 Watt enclosed (Navy) Type Flood. Rugged, concussion, vibration and exposure resistant.

No. 4200 Enclosed Flood 750 - 1000 - 1500 Watt. Rotation feature with degree markings makes this a practical, easy to service unit for sports lighting.

No. 3018 Convertible Does a fine area lighting job plus spot-lighting.

REVERE ELECTRIC MFG. CO.

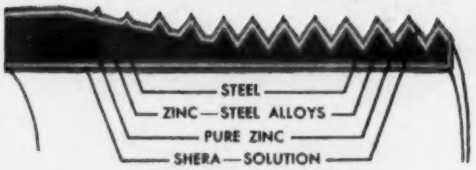
6011 BROADWAY • CHICAGO 40, ILLINOIS
INDOOR AND OUTDOOR LIGHTING EQUIPMENT TO SERVE EVERY NEED

SHERARDUCT—FULL WEIGHT, THREADED, RIGID STEEL CONDUIT

THERE to STAY!

There is nothing temporary about SHERARDUCT! It's about the most permanent thing you can buy in wiring. Permanent because it is *Sherardized.* This provides maximum protection against *fire, acids, alkalies and other corrosive agents* . . . **provides lifetime mechanical protection to wires and cables.**

The SHERARDIZING process drives a pure zinc coating into the steel surface —alloys this coating to the steel tube. Then it is sealed with a special acid-proof, clear "Shera-Solution," baked on, for added durability. Thus, outside and inside surfaces, threads and ends of the conduit are all securely protected with both a zinc coating and the "Shera-Solution."



This combined coating will not split or peel, will not crack when the conduit is bent, offers years and years of complete protection.

Everything in wiring points to NE

National Electric Products Corporation
Pittsburgh 30, Pa.

NATIONAL ELECTRIC PRODUCTS
NE
WIRING SYSTEMS
CABLES

★

For manufacturing, domestic, industrial and utilities wiring . . .

Specify wire and cable insulation made from GEON Plastics

8 REASONS WHY . . .

★ ***Excellent electrical properties***

★ ***Thin coating of insulation***

★ ***More conductors in a given space***

★ ***Ease of handling***

★ ***Easy stripping***

★ ***Light weight***

★ ***Resistance to ozone, wear, sunlight, water, chemicals, and most other normally destructive factors***

★ ***14 colors including NEMA standards***

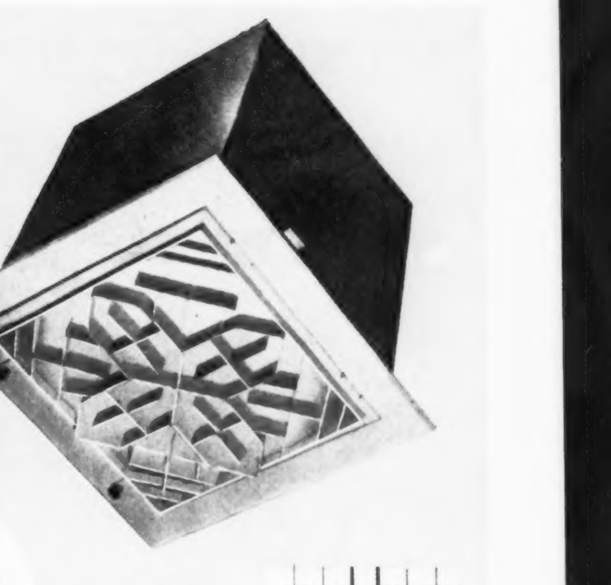
Geon
Polyvinyl Materials

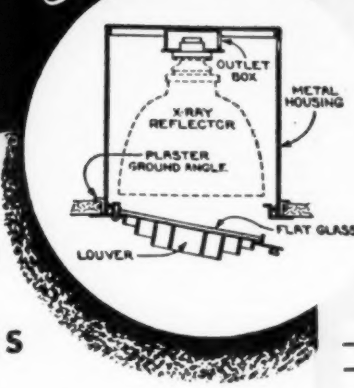
Be sure to specify wire or cable insulated with GEON in order to get *all* these advantages. Or, for information regarding special applications please write Department K-4, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario.

B. F. Goodrich Chemical Company A DIVISION OF THE B. F. GOODRICH COMPANY

GEON polyvinyl materials • HYCAR American rubber • KRISTON thermosetting resins • GOOD-RITE brand chemicals

Curtis Incandescent RECESSED UNITS *Add Selling Punch*



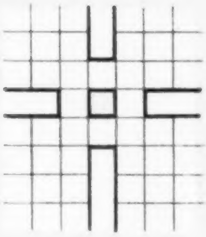


DESIGNED TO MATCH CURTIS RECESSED FLUORESCENT TROFFERS

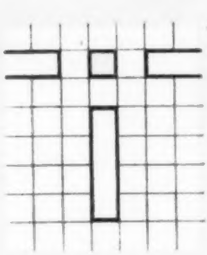
Architects and Interior Designers are using more and more incandescent recessed lighting and you can safely specify Curtis wherever recessing equipment is required . . . to provide selling PUNCH for stores.

These incandescent units are available with Square or Circular ceiling rims. In either style, they can be furnished with lens, louver or lens *and* louver. Units are available with Curtis Silver-Mirrored "X-Ray" Reflectors with either a concentrated or distributed beam. A hinged rim permits easy maintenance and lamp replacement.

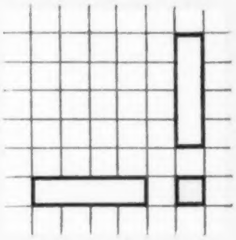
The No. 2495 illustrated above is particularly designed to match Curtis Troffers as used in acoustical ceilings. This unit is finished in neutral Satin Gray and white Fluracite which blend well with fluorescent lighting. The entire unit is packed complete in one container for simplified handling. *Write today for complete data on No. 2495 and other Curtis recessing equipment.*



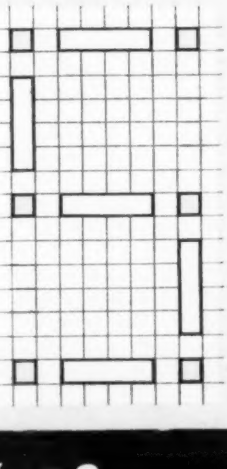
Where architectural arrangements require "T" formations, the No. 2495 meets the situation perfectly.



No. 2495 forms many interesting ceiling patterns. Permits a perfect center for transverse and longitudinal lines.



Ideal for right-angle turns or for following wall contours with continuous lines of light.



The "S" pattern is another one of the many ceiling patterns possible with No. 2495 to follow established floor arrangements with punch lighting.

CURTIS *Lighting*, INC.

6135 WEST 65TH STREET, CHICAGO 38, ILLINOIS

NOW! COMPLETE YOUR WIRE LINE WITH THIS NEW ROME UNDERGROUND CABLE

ROME CABLE QUALITY

RoMarine-RoPrene

From bare copper transmission strand to underground distribution cable, you can now fill the wiring requirements of *all* your customers from the broad line of Rome quality wires and cables.

RoMarine-RoPrene is the newest addition to that line. Developed primarily for direct earth burial or duct service, here is a 600-volt underground distribution cable you can sell with confidence. Available in single and multiple conductor sizes, it is insulated with a high quality low water absorption, long aging compound . . . RoMarine. Its sheath is a Neoprene compound . . . RoPrene. Combine the two, and you have *double* protection from moisture plus high resistance to the effects of oil, soil acids and alkalies, and other corrosive elements. Easy to handle and splice, RoMarine-RoPrene is the natural substitute for lead sheathed cable.

FROM BAR TO FINISHED WIRE

ROME CABLE CORPORATION
ROME • NEW YORK

ROME CABLE
ROME, N.Y.

Faries New and Different

ADJUSTABLE FLUORESCENT DESK LAMP

FOR EXECUTIVES

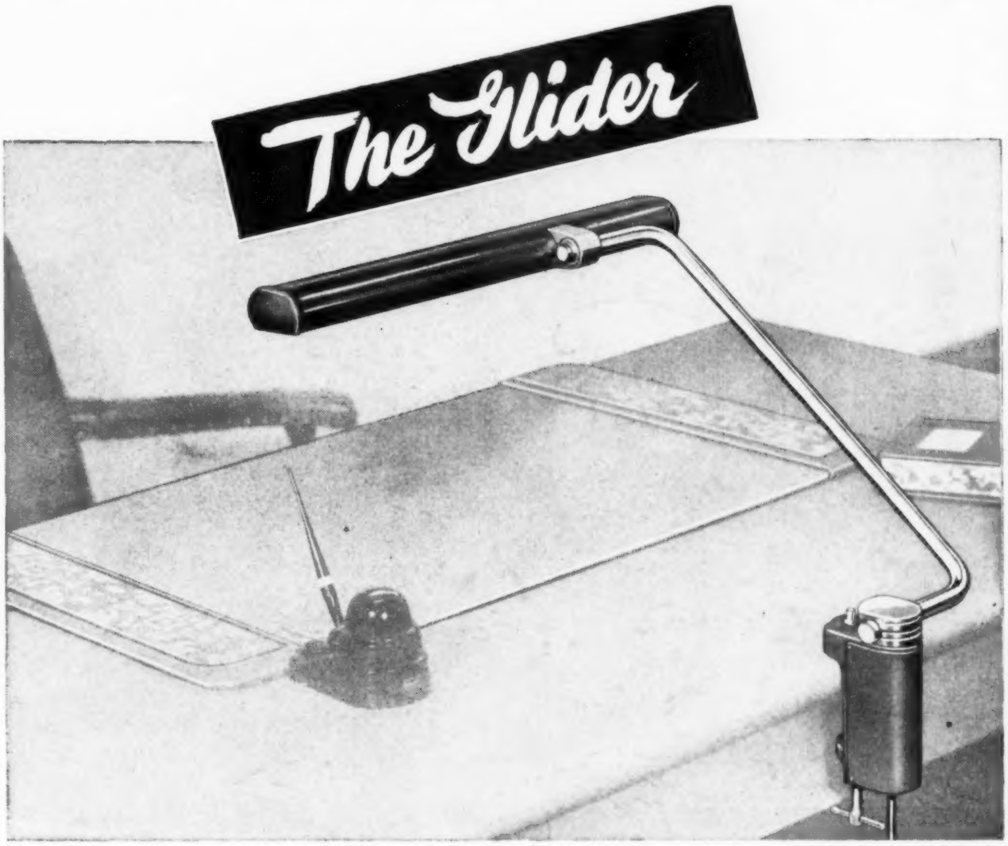
FOR ACCOUNTANTS

FOR DRAFTSMEN

FOR ARTISTS

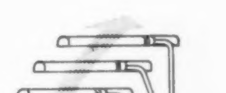
FOR SECRETARIES

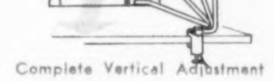
FOR STUDENTS



The Glider is really new! It's a lamp of exceptional beauty and almost unlimited use. It is tomorrow's desk lamp . . . today!

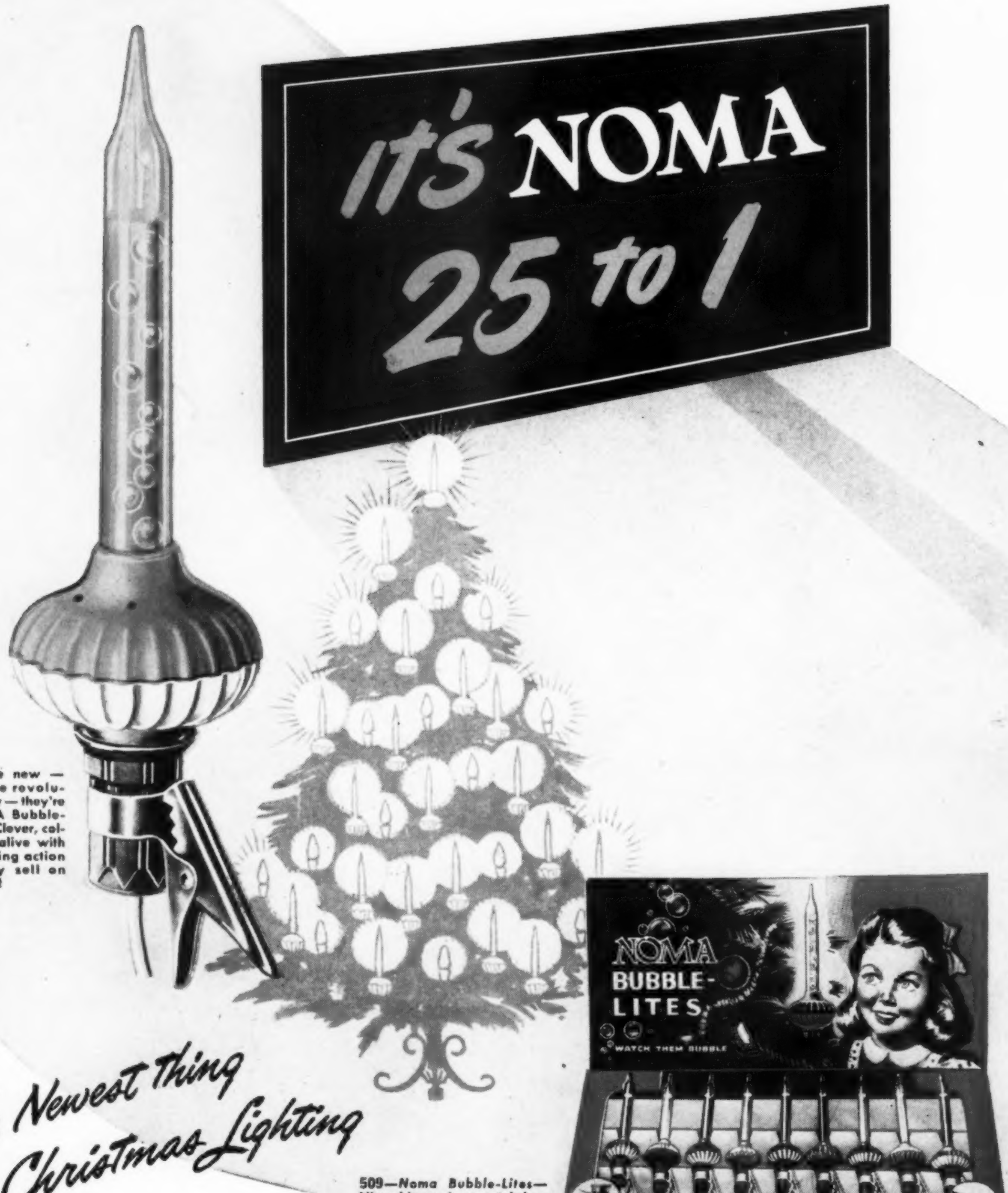
A mere touch of the hand will move the Glider into desired position . . . to give plenty of soft, cool light so soothing to tired, over-strained eyes. Easy to move . . . but it *stays* in position until moved again. Easy on the eyes? Yes, in more ways than one! The beautiful airflow design . . . electroplated statuary bronze shade and polished chromium arm add beauty to the most lavish office furnishings.


Complete Vertical Adjustment


Complete Horizontal Adjustment

Faries Manufacturing Company, Decatur, Ill.
Pioneers in Lighting Equipment Since 1880

In Brand Identification!


IT'S NOMA
25 to 1
NOMA
BUBBLE-LITES
WATCH THEM BUBBLE
NOMA BUBBLE-LITES

They're new — they're revolutionary — they're NOMA Bubble-Lites. Clever, colorful, alive with bubbling action — they sell on sight!

The Newest Thing in Christmas Lighting

509—*Noma Bubble-Lites*—Nine shimmering crystal clear candles of bubbling light, set in colorful plastic bases. Completely wired. Has special clip to make attachment to tree easy.

In Brand Preference!

3010—*7 light indoor Berry Bead outfit*—Has Add-on connector . . . fastens upright to branch of tree securely.

NOMA
EACH LAMP BURNS INDEPENDENTLY
NO MORE SEARCHING FOR THE BURNED OUT LAMP

126—*Color Point Star*—Complete with cord and plug. Light it—and the points are gay with glowing Christmas red.

110—*8 light Series loop type outfit*—Tri-plug connection with open outlet for attaching additional sets.

The best known line in Christmas Lighting

NOMA 15 light DECORATIVE OUTFIT
EACH LAMP BURNS INDEPENDENTLY
No more searching for the burned out lamp . . .

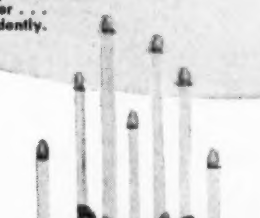
3415—*15 light Straight line outfit*—Wires in multiple . . . has Add-on connecter . . . lamps burn independently.

In cities from coast to coast—a recent survey of Christmas lighting shows that more people know NOMA—more people prefer NOMA—than any other brand. In the field of decorative lighting . . . it's NOMA 25 to 1!

That NOMA leadership . . . that NOMA demand . . . is good news for NOMA dealers. But . . . that's not all! Now . . . NOMA, the oldest name in Christmas lighting brings you the newest thing in Christmas decoration . . . NOMA BUBBLE-LITES.

Beautiful NOMA BUBBLE-LITE trees and colorful NOMA BUBBLE-LITE sets . . . alive with the spirit of Christmas . . . are sweeping the country. They're new . . . they're revolutionary . . . They're NOMA. They've joined the NOMA profit parade for 1947 . . . combined forces with the continuously popular NOMA Color Lights, the consistently profitable NOMA Christmas decorations that have made NOMA the Greatest Name in Decorative Lighting.

700—*Illuminated Tree Top Angel.* Silver wings and dress. Hidden cardboard cylinder makes it easy to slip over top of tree.



198—*Artistic Candolier.* Tapered candles equipped with lamps and halo device give beautiful glow effect

NOMA

ELECTRIC CORPORATION

55 WEST 13TH STREET • NEW YORK 11, NEW YORK

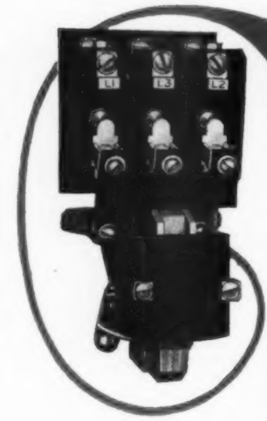
ALL THESE STARTERS ARE BUILT AROUND "3C" Bulletin 7700 A. C. MAGNETIC CONTACTORS

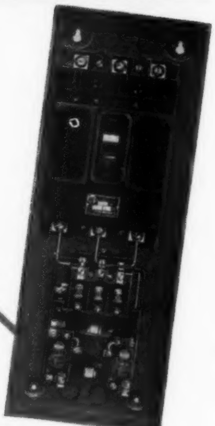
These small, compact, sturdy Contactors are the backbone of all magnetic motor starters pictured here—Sizes 0 and 1—15 and 25 amperes.

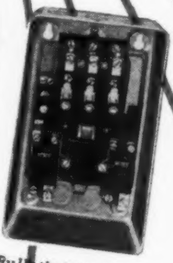
Think what this means to the user of these starters—Less spare parts—and unifomity of design.

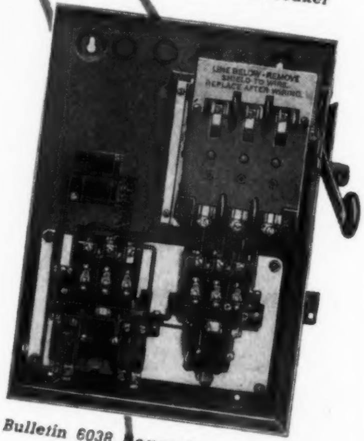
FEATURES

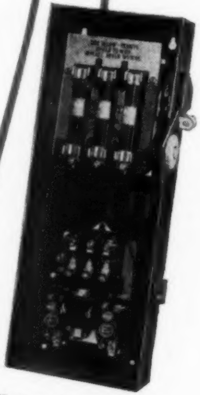
- Hinged armature, vertical lift magnet
- Short armature travel—minimum impact
- No sliding or wearing parts
- Double Break Silver to Silver Contacts
- All terminals front accessible
- Plenty of wiring space
- Cabinet knockouts . . . Top, Bottom, Sides, Back

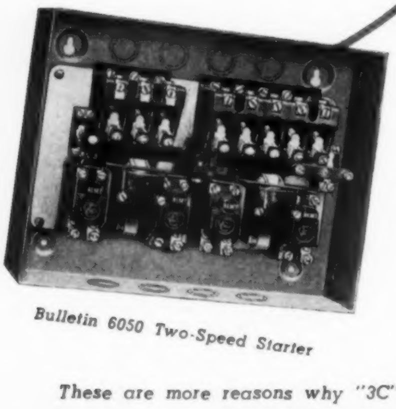

Bulletin 7707 A. C. Contactor

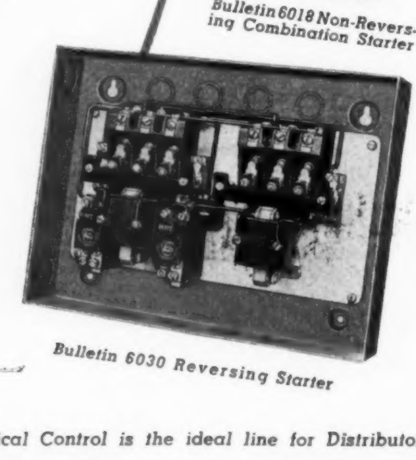

Bulletin 6020 Non-Reversing Combination Starter with Air-Circuit Breaker

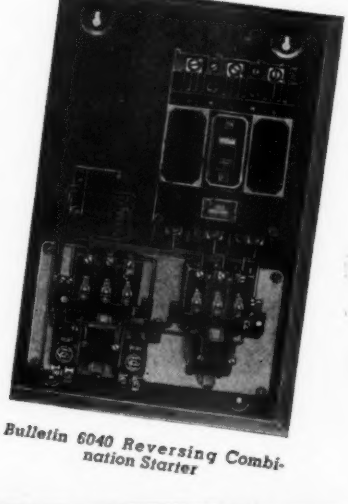

Bulletin 6013 Non-Reversing Starter


Bulletin 6038 Reversing Combination Fusible Starter


Bulletin 6018 Non-Reversing Combination Starter


Bulletin 6050 Two-Speed Starter


Bulletin 6030 Reversing Starter


Bulletin 6040 Reversing Combination Starter

These are more reasons why "3C" Electrical Control is the ideal line for Distributors.

THE CLARK CONTROLLER CO.

EVERYTHING UNDER CONTROL · 1146 EAST 152nd STREET, CLEVELAND 10, OHIO

WHETHER IT'S DUAL OR SINGLE

IT'S ALWAYS A

"RIGHT SPOT UNIT"

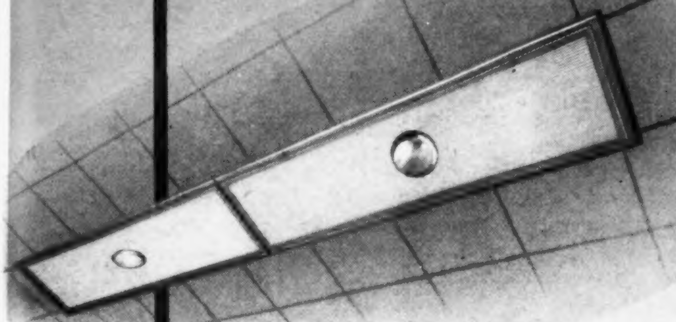
CHOOSE THE "ALL-BRIGHT" RIGHT LIGHT FOR THE RIGHT SPOT

No matter what particular lighting problems you have—ALL-BRIGHT has the right fluorescent answer.

(To the Right) RU SKY-LIGHT—The well known, Field-tested and approved, custom-built, suspension mounted luminaire, designed and developed for use in conjunction with numerous other ALL-BRIGHT Units.

(To the Left) RSU SKY-LIGHT FLOOD UNIT—Ceiling mounting in an 8 foot run. (Available in either individual or continuous runs.) The Spotlights for intensified merchandising are illustrated on 6 foot centers.

(Above to the Right) REC LOUVERED, RECESSED, CONTINUOUS LUMINAIRE — of modern design — piano-hinged frame — can be used either individual or continuous for your needs.



(Below to the Left) RECSU RECESSED DUAL-PURPOSE FLUORESCENT INCANDESCENT UNIT, designed in 8 foot runs or 10 foot runs or multiples of each. Supplied with clear Skytex or Alba-Lite glass, floodlight spaced in center of each 4 or 5 foot section for dynamic display.

SEND FOR ILLUSTRATED FOLDER

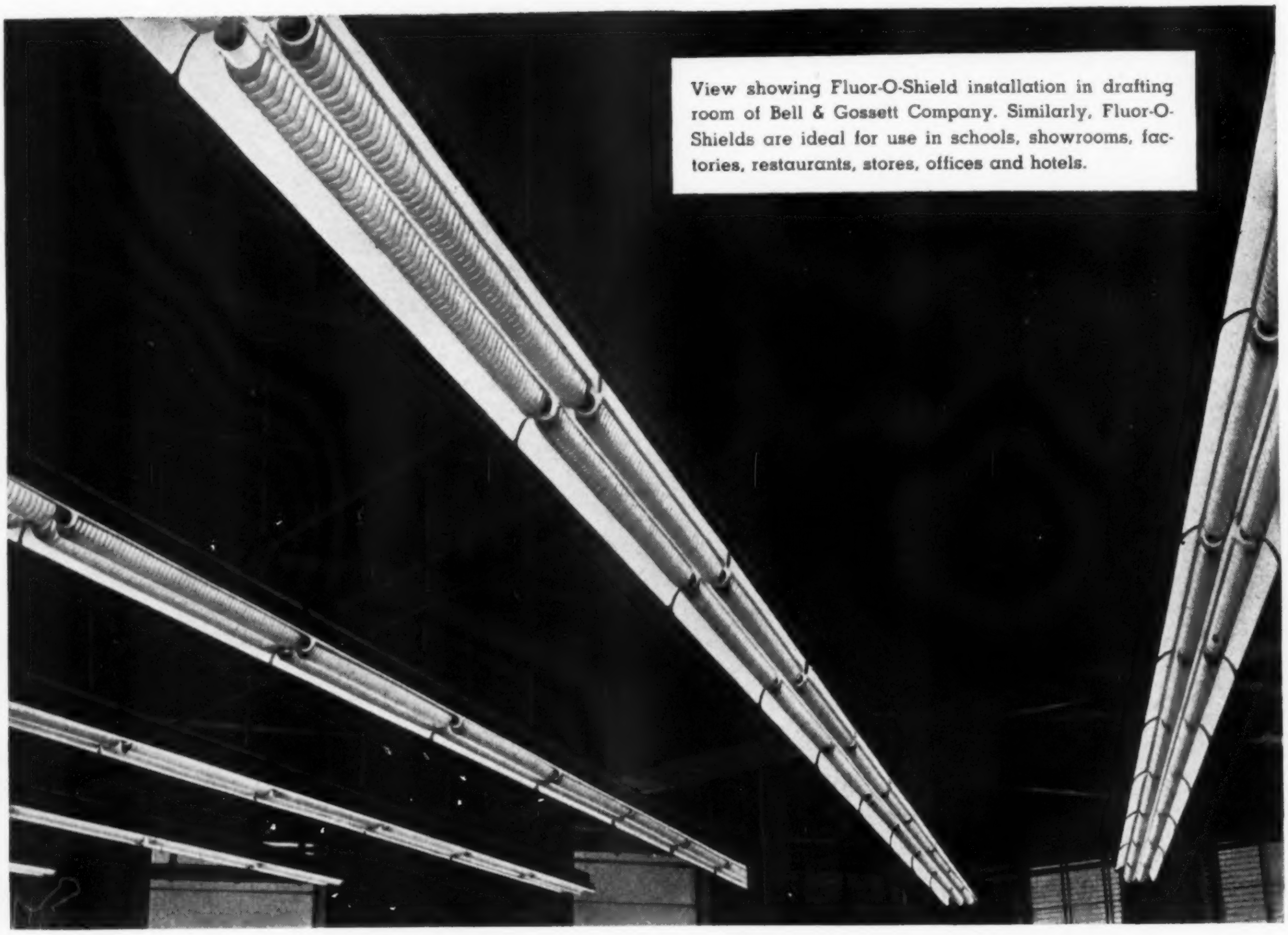
Wired and Fabricated A. F. of L.

Union Made I.B.E.W.

LIGHT RIGHT WITH All-bright

All-bright ELECTRIC PRODUCTS COMPANY
3917-25 North Kedzie Avenue
Chicago 18, Illinois

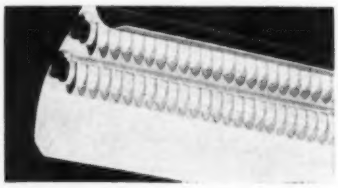
Copyright 1947



View showing Fluor-O-Shield installation in drafting room of Bell & Gossett Company. Similarly, Fluor-O-Shields are ideal for use in schools, showrooms, factories, restaurants, stores, offices and hotels.

Bell & Gossett Company rid their drafting room of glare this inexpensive way

No trick to install Fluor-O-Shields. Just snap them on. No bolts or tools needed. No flat surfaces to catch dust or dirt.



3 sizes to fit most exposed lamp fixtures. For continuous or unit mounting. 92% of the light and none of the glare.

Light weight, ease of attachment and all around efficiency make Fluor-O-Shields the most practical light diffuser on the market.

"Our lighting situation was improved greatly after we had installed fluorescent lighting fixtures. But then we had a glare problem to deal with. We found the most efficient and inexpensive answer in Fluor-O-Shields. They have proved very satisfactory and our employees are all highly pleased with the results."

Bell & Gossett Company, Morton Grove, Illinois

Bell & Gossett Company, manufacturers of hot water heating equipment, have installed 2-tube 40-watt standard industrial reflector fixtures, butted end-to-end. Fixtures are placed 9′6″ from the floor where they furnish an even intensity of light at working level. Approximately 220 Fluor-O-Shields have been installed in this room. This is the most practical and economical way known to get efficient lighting with the least amount of glare. Fluor-O-Shields are endorsed by lighting engineers, lamp tube manufacturers and electrical testing laboratories for use wherever good lighting is essential to better working conditions. For more data, specifications and information, write to address below.

THREE SIZES

$\$1^{95}$ 40 watt 46⅞ inch

$\$1^{25}$ 20 watt 22⅞ inch

NEW! $\$2^{95}$ 100 watt 58⅛ inch

Aluminum finished in white baked enamel

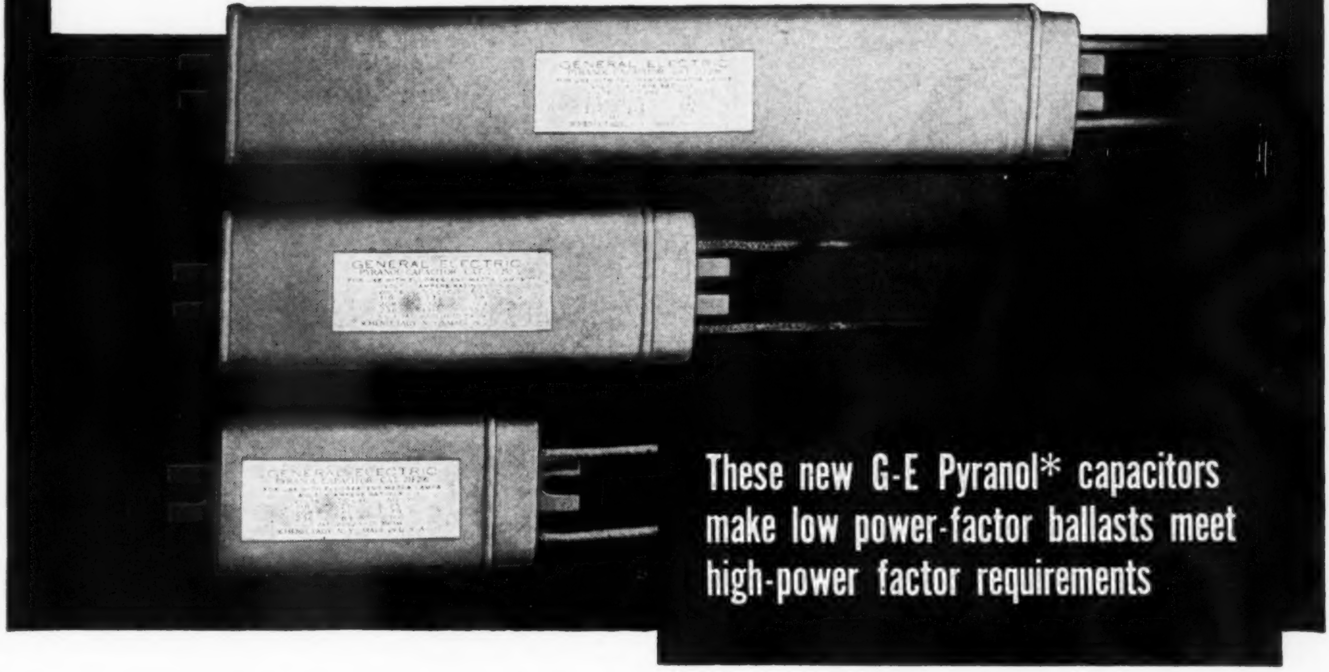
FLUOR-O-SHIELD*

Light Diffuser for Fluorescent Lamps

*Trade Mark—Patent Pending.

CAMFIELD MANUFACTURING COMPANY • GRAND HAVEN, MICHIGAN

need POWER-FACTOR IMPROVEMENT for FLUORESCENT LAMP FIXTURES?



These new G-E Pyranol* capacitors make low power-factor ballasts meet high-power factor requirements

If your present supply of high-power-factor ballasts is inadequate for your high-power-factor fixture requirements, use the new G-E Type FL capacitors.

These new Type FL capacitors**, when simply installed in the fixture with available ballasts, bring low-power-factor equipment up to acceptable power-factor levels.

The size and weight of these new capacitors permit easy assembly in new or existing fixtures. A short shipping schedule on Type FL capacitors make them available for current fixture business—*now—when you need them.*

These hermetically sealed Pyranol impregnated units, featuring new low cost as well as small, light-weight design, offer the same high quality as millions of G-E capacitors now used in fluorescent installations.

Three designs are available for operation at 50 or 60 cycles, 118, 208 or 236 volts a-c, and when used individually, or in combinations as suggested, provide a minimum of 85 to 95 percent power factor for a single 15-watt lamp, or up to four 40-watt lamps. For further details, write to *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

***Listed by Underwriters' Laboratories, Inc.*

DATA FOR 60 CYCLE, 118 VOLTS A-C

Lamp Size Watts	1 Lamp	Approx. P-F	2 Lamps	Approx. P-F	3 Lamps	Approx. P-F	4 Lamps	Approx. P-F
15-T-8	S	95	M	86	L	95+	L	86
15-T-12	S	86	S & M*	95+	L	88	S & L*	87
20-T-12	S	90	M	85	M & L*	91	L	85
30-T-8	M	85	L	85	M & L*	86	L & L*	86
40-T-12	M	86	L	86	M & L*	86	L & L*	86

Symbols: S—Cat. No. 21F296; M—Cat. No. 21F297; L—Cat. No. 21F298 *Two capacitors in parallel

VOLT-AMPERE RATINGS

Volts A-C	21F296		21F297		21F298	
	50 Cycle	60 Cycle	50 Cycle	60 Cycle	50 Cycle	60 Cycle
118	21	25	33	39	66	78
208	65	78	102	123	204	245
236	83	100	131	157	262	314

F-L Capacitors

**Pyranol is General Electric's registered trade name for a noninflammable liquid dielectric for capacitors.*

GENERAL ELECTRIC

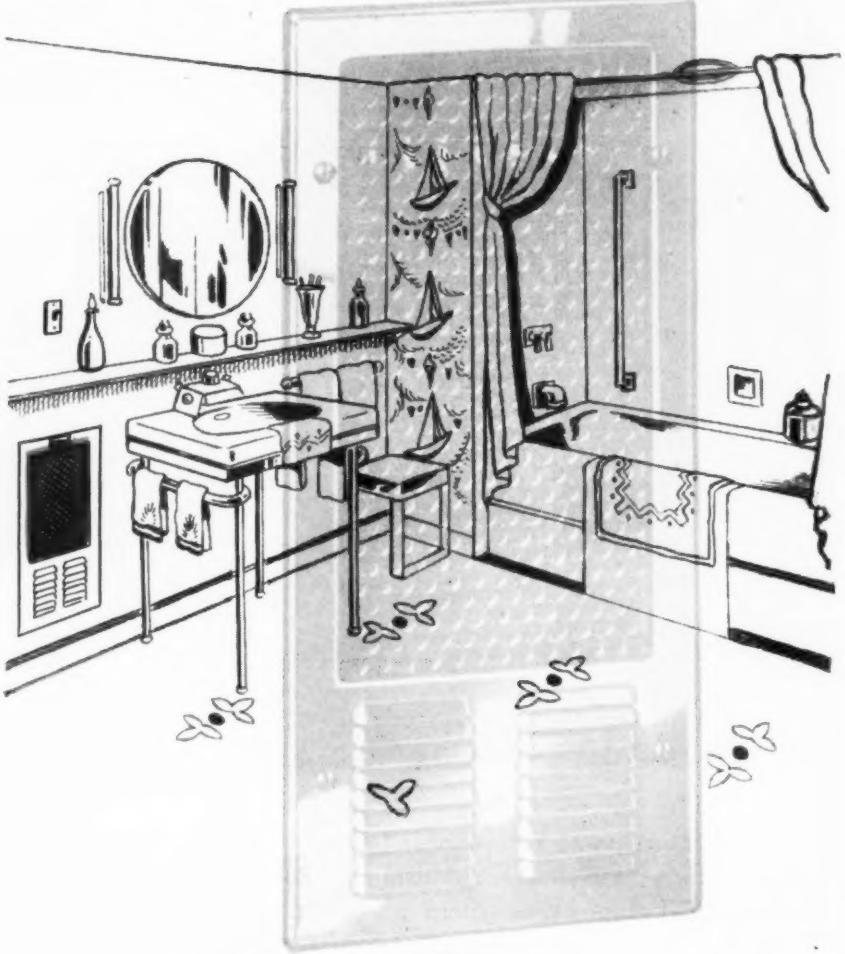
407-110-5700

Efficiently-designed Heating Systems

NOW INCLUDE THE

FA

ELECTRIC QUIKHETER

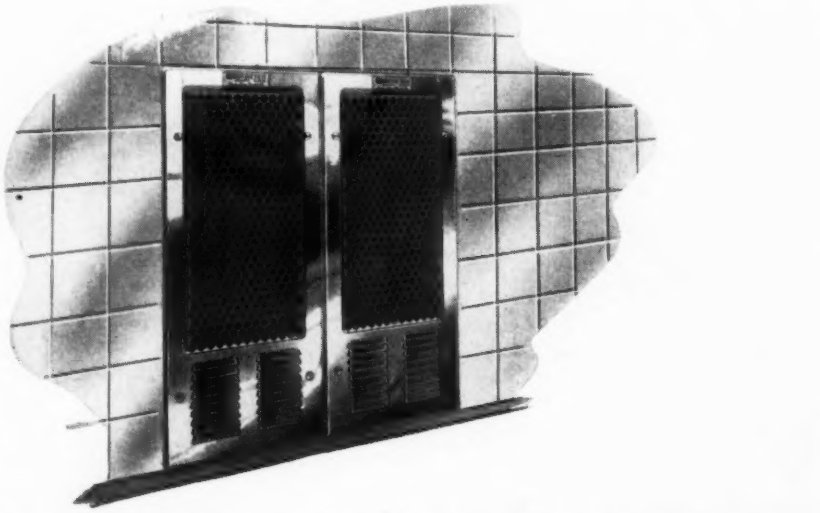


No matter how efficient your regular heating system may be, there are always times when extra heat is not only a comfort and convenience but an almost necessity.

There are those cold, chilly and damp mornings, for instance, when the regular heating plant is not in operation. Then, there are those cold, blustery days, when wind and cold just will seep into the room and chill it. Or there are those times when it seems hours before heat begins to filter into the house from the regular heating plant.

FA Electric Quikheters are ideal for situations such as these. Easy to operate, requiring only the flip of a conveniently-located switch, they send forth billows of warm air that will change the temperature of the average room in three to five minutes.

Install one of these attractive, convenient, fuel-saving, comfort-giving units in your home today and thus provide against unusual weather variations.



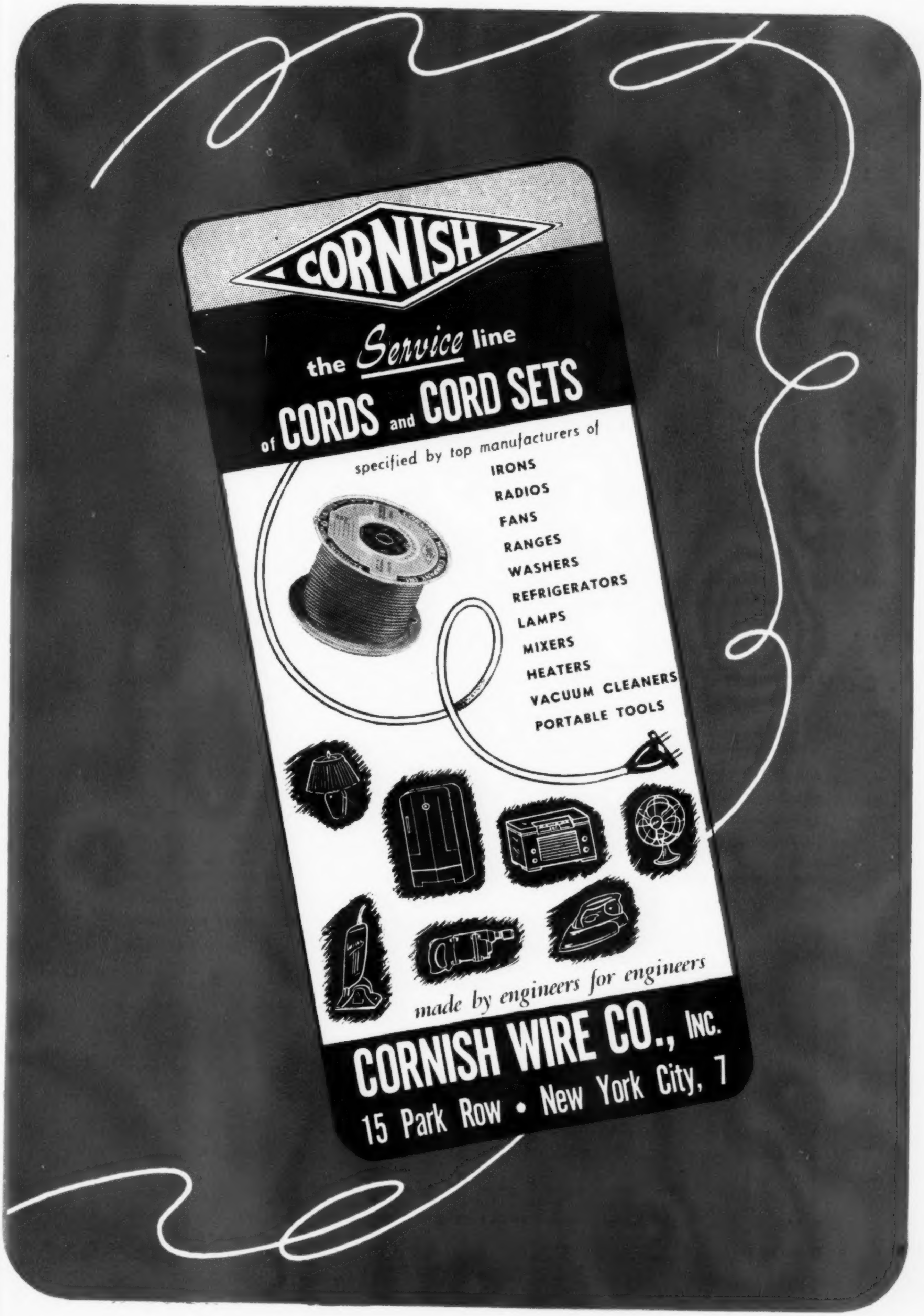
Now Available

Built-in FA Electric Quikheters are available in single units of 1,000 and 1,500 watts and twin units of 2,000 and 3,000 watts, for immediate delivery. Contact your nearest electrical contractor for details or send for Bulletin No. 77.

MAKERS OF...
BUSDUCT
PANELBOARDS
SWITCHBOARDS

Frank Adam
ELECTRIC COMPANY
ST. LOUIS, MISSOURI

SERVICE EQUIPMENT
SAFETY SWITCHES
LOAD CENTERS
ELECTRIC QUIKHETER



CORNISH

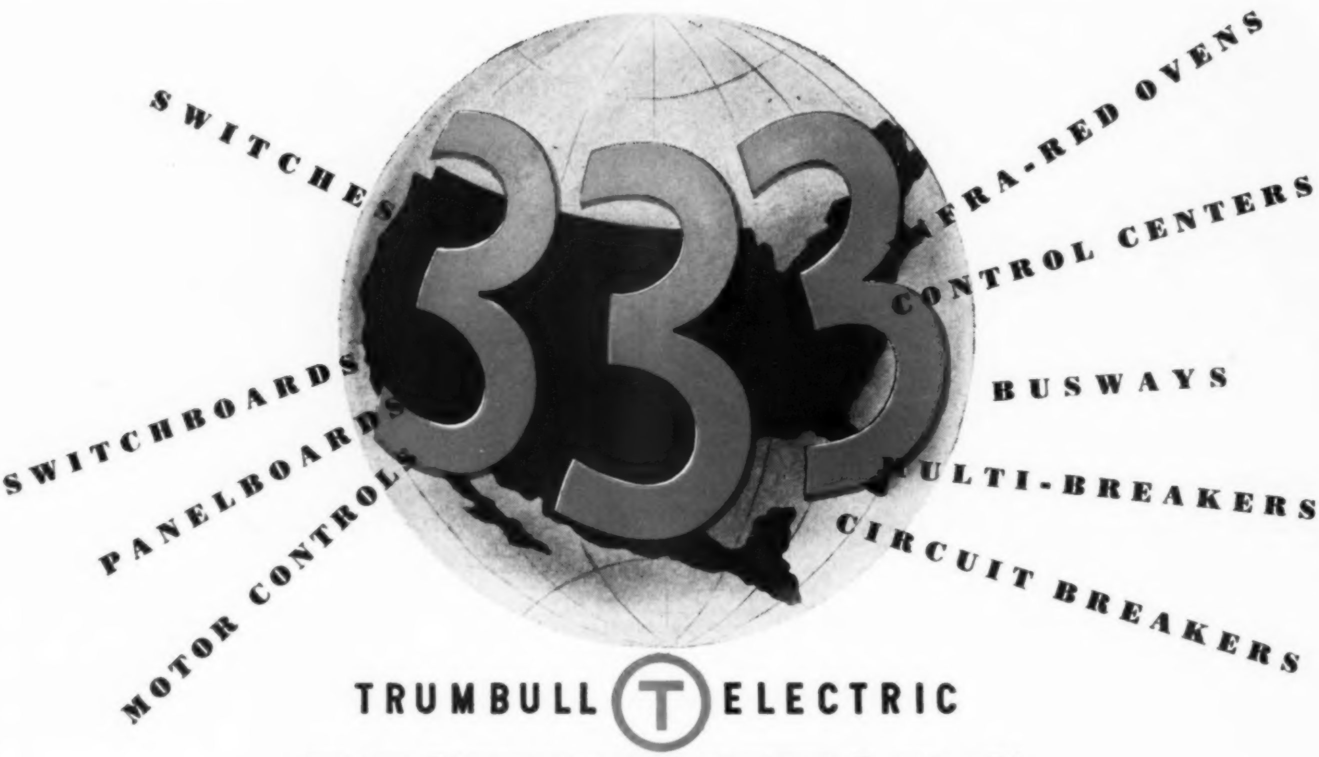
the *Service* line of CORDS and CORD SETS

specified by top manufacturers of

- IRONS
- RADIOS
- FANS
- RANGES
- WASHERS
- REFRIGERATORS
- LAMPS
- MIXERS
- HEATERS
- VACUUM CLEANERS
- PORTABLE TOOLS

made by engineers for engineers

CORNISH WIRE CO., INC.
15 Park Row • New York City, 7



TRUMBULL Ⓣ ELECTRIC

DISTRIBUTORS

...cover the Country...*for your convenience!*

The Trumbull distribution set-up is the outgrowth of careful initial selection and a continuous development and training program. We can truthfully say that our 333 Electrical Wholesalers, with their thousands of men, are well schooled in the Trumbull line . . . are exceptionally able and willing to give you the technical information required for modern electrical installations.

The Architect, whose specifications call for reliability, compactness, appearance . . . the Electrical Engineer who has specific problems to solve . . . the Contractor who wants delivery and competitive prices . . . the Production Manager who seeks cost cutting equipment, better power distribution and control, lower maintenance . . . all need localized service.

Trumbull Authorized Electrical Wholesalers will give it to them . . . from Maine to Miami —from San Diego to Seattle—in every important center from coast to coast.

Forty-eight years ago the Trumbull "Line" was *one* product . . . today it is complete . . . from the simple, inexpensive disconnect switch to interconnected Busways that distribute current throughout the largest industrial plants.

Whatever your requirements, wherever you are, there's an Authorized Trumbull Electric Wholesaler ready to serve you well.

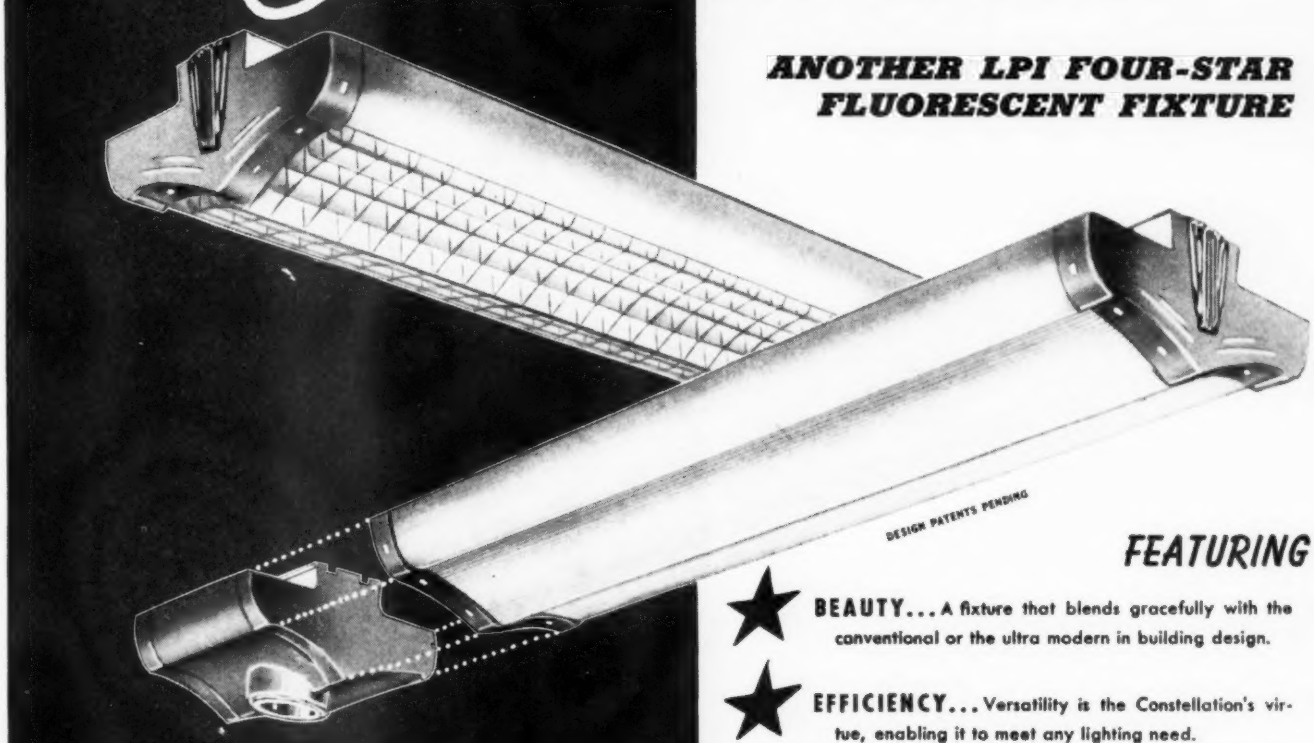
The Trumbull policy of giving full and continued support to its Wholesalers is illustrated by this advertisement which runs in the principal trade publications for April and May.

THE TRUMBULL ELECTRIC MANUFACTURING COMPANY
PLAINVILLE, CONNECTICUT

OTHER FACTORIES AT NORWOOD, OHIO • LOS ANGELES • SAN FRANCISCO • SEATTLE

Constellation

ANOTHER LPI FOUR-STAR FLUORESCENT FIXTURE



The Attractive Spot-o-Lite unit can be added to single units or continuous runs for impressive accent lighting.

FEATURING

- ★ **BEAUTY...** A fixture that blends gracefully with the conventional or the ultra modern in building design.
- ★ **EFFICIENCY...** Versatility is the Constellation's virtue, enabling it to meet any lighting need.
- ★ **EASY INSTALLATION...** A single instruction sheet contains all information necessary for any installation.
- ★ **EASY MAINTENANCE...** Expert engineering and design mean long life and low-cost Easy Maintenance.

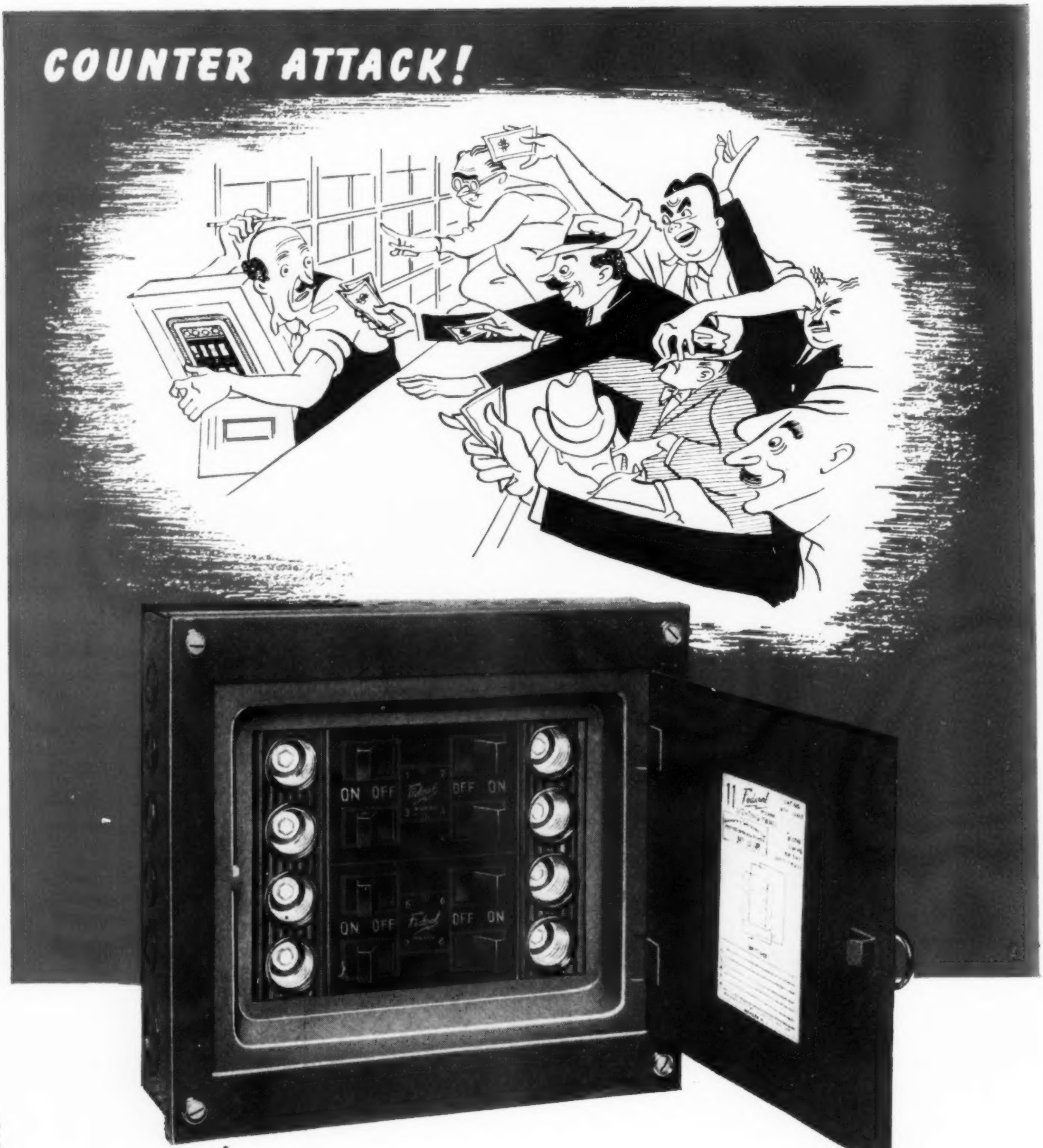
FOR PLANNED LIGHTING

The Constellation offers the ultimate in *planned lighting* installations. Made in both two-light and four-light, 40 Watt units, it can fulfill any commercial lighting need. Single units or continuous runs can be installed at ceiling surface or from attractive, adjustable hangers. Comfortable fluorescent light flows through bent, ceramic-treated glass panels or rigid, baked enameled louvres. The Constellation meets the requirements of the Utilities Research Laboratories.

Sold nationally through leading electrical wholesalers.

LIGHTING PRODUCTS, INC.
Highland Park Illinois

LPI



FEDERAL'S SIX PLANK PLATFORM THAT SUPPORTS YOUR SALE OF TYPE NTPS PANELBOARDS:

Plank 1 — Dramatic advertising to your market.
Plank 2 — Informative broadsides for your customers.
Plank 3 — Provocative stuffers for follow-through mailings.
Plank 4 — Arresting window streamers to direct traffic to your panelboard department.
Plank 5 — Unusual counter cards that stimulate point-of-sale purchases.
Plank 6 — Missionary work by field representatives aggressively contacting your market.

A Federal representative will call on you soon with full details; or write direct to Federal for complete information.

FEDERAL ELECTRIC PRODUCTS COMPANY, MANUFACTURERS OF A COMPLETE LINE OF ELECTRICAL PRODUCTS INCLUDING: MOTOR CONTROLS, SAFETY SWITCHES, CIRCUIT BREAKERS, SERVICE EQUIPMENT, PANELBOARDS

they're
crowding
counters
everywhere
for the new *Triple-improved*

FEDERAL NOARK

TYPE NTPS PANELBOARD

THREE BIG *New* FEATURES

1 *Sure contact spring* incorporated into switch assembly of stationary parts.

2 *Only three current-carrying parts* in each circuit . . . each part heavier and more rugged than ever.

3 *Phenolic panelboard unit* . . . handsomely designed and durable.

Federal NOARK

CONTROLS FOR LIGHT AND POWER

Executive Offices: 50 PARIS STREET, NEWARK 5, N. J. • *Plants:* HARTFORD, CONN. • NEWARK, N. J. • ST. LOUIS, MO. • L. I. CITY, N. Y.

It's A Bright Idea To Add . . .

CHAMPION LAMPS

To Your Line

The demand for good industrial lighting and lamps has never been greater than it is today.

Every customer and prospect in your territory buys lamps. Are you getting your rightful share of this steady and profitable volume business?

Champion Lamps are particularly suited to electrical wholesaling. They have the performance that keeps the repeat business coming in to you. There's no red tape, no forms to fill out, no restrictions or contracts to hinder you from getting all the business including good accounts you've never been able to sell before.

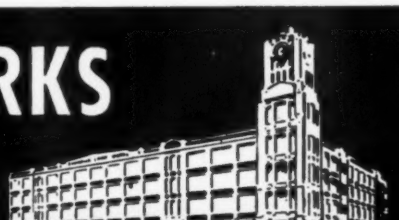
Champion's low cost production set-up and clean-cut, direct-to-wholesaler-only selling policy assures maximum profit for you.

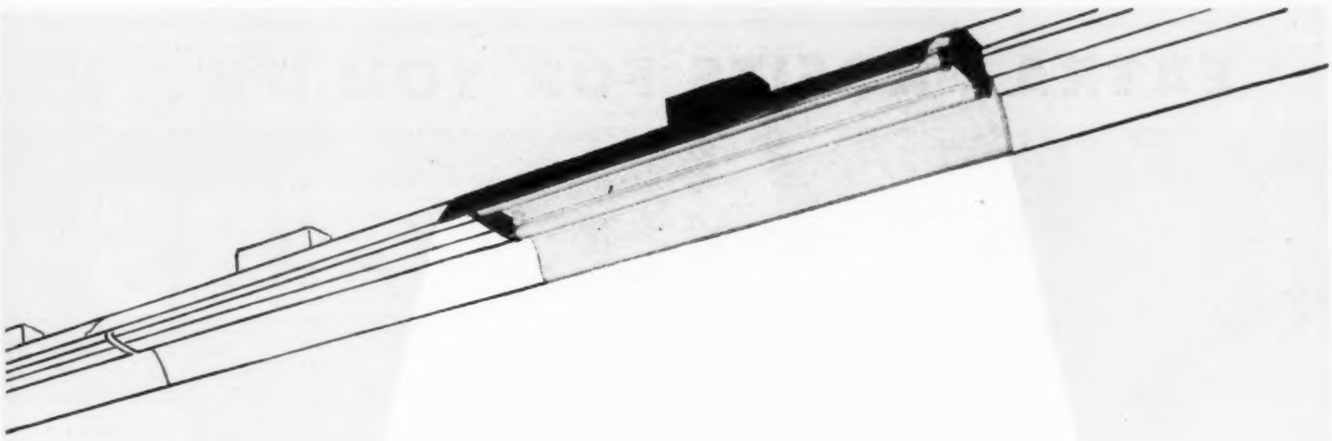
You can do more business and make more money selling Champion Lamps.

CHAMPION LAMP WORKS

Lynn, Massachusetts

A DIVISION OF CONSOLIDATED ELECTRIC LAMP CO.





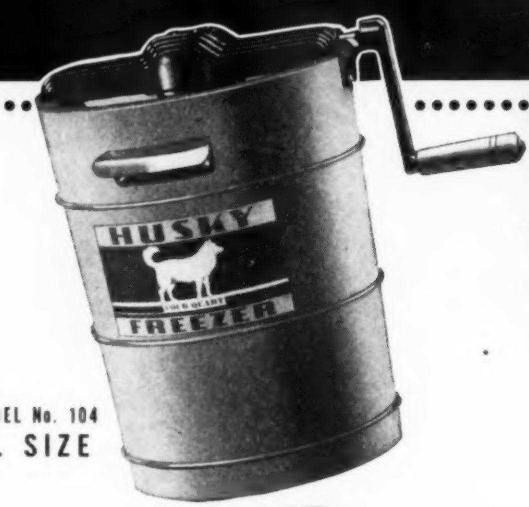
CHAN'L-RUN
The Basic Unit System

HOLDENLINE

HOLDENLINE CO.
Pioneers in Fluorescent
2301 SCRANTON RD., CLEVELAND 13, OHIO

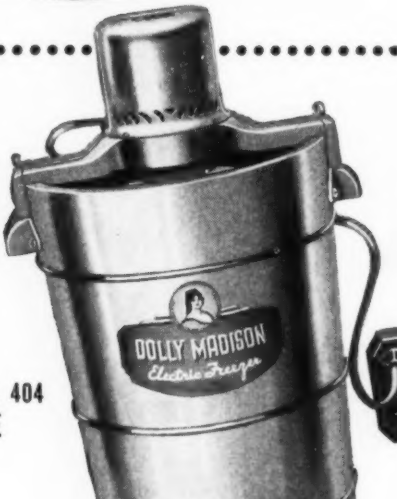
EXTRA PROFITS FOR YOU ON . . .

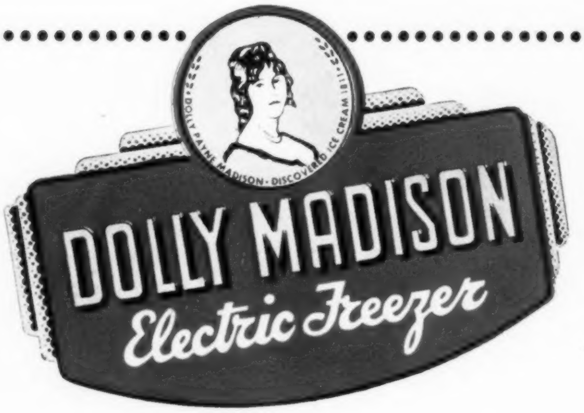
Ice Cream FREEZERS


HUSKY
FOUR QUART
FREEZER

HUSKY
FOUR QUART
J. E. PORTER CORPORATION • OTTAWA, ILLINOIS, U. S. A.
FREEZER

HAND MODEL No. 104
4 QT. SIZE


DOLLY MADISON
Electric Freezer


DOLLY PAYNE MADISON • DISCOVERED ICE CREAM 1811
DOLLY MADISON
Electric Freezer

ELECTRIC MODEL No. 404
4 QT. SIZE

YES, the HUSKY and the DOLLY MADISON are America's favorite ice cream freezers... They're tops for attractive styling, easy operation and popular price . . . That's why you can rely on extra profits with this line . . . manufactured by the 79-year-old J. E. Porter Corporation.

Heavy current demand for our products prevents us from assuring immediate delivery of all types of Porter freezers. Meanwhile, we'll be glad to send specifications and prices on the complete line, with a promise to fill your orders as fast as conditions permit.

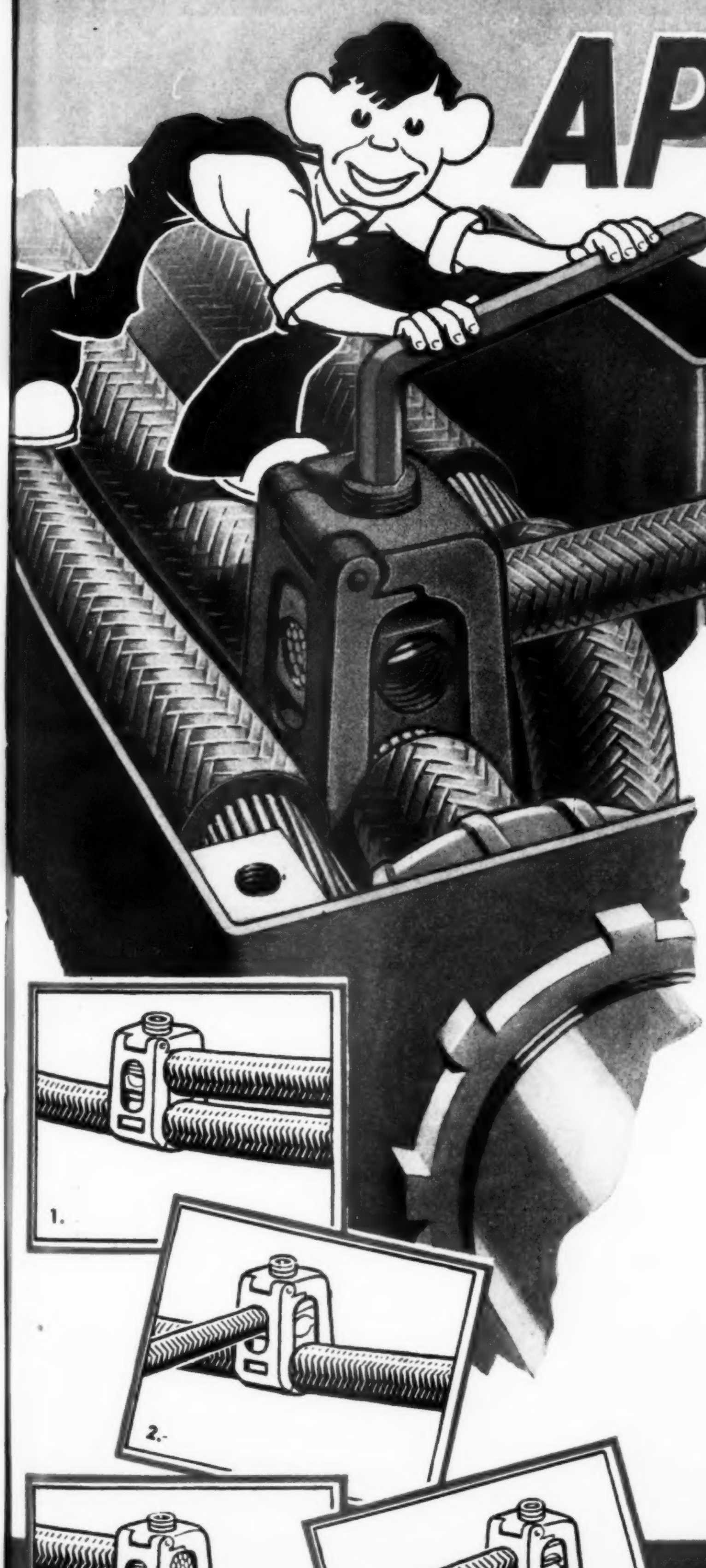
79 YEARS OLD

THE J. E. **PORTER** CORPORATION
OTTAWA, ILLINOIS

MANUFACTURERS OF AMERICA'S FAVORITE ICE CREAM FREEZERS

Export Sales Department • 201 North Wells Street • Chicago 6, Illinois • Cable Address: CHASIHO

It's smart to sell APPROVED



SMART, because "Approved" is the shortest and most convincing one-word sales talk on tested quality known to our industry.

T&B TEE PARALLEL TAPS*

—like all other T&B Lock-Tite Pressure Connectors have the distinction of being Approved by the Underwriters' Laboratories—in all sizes.

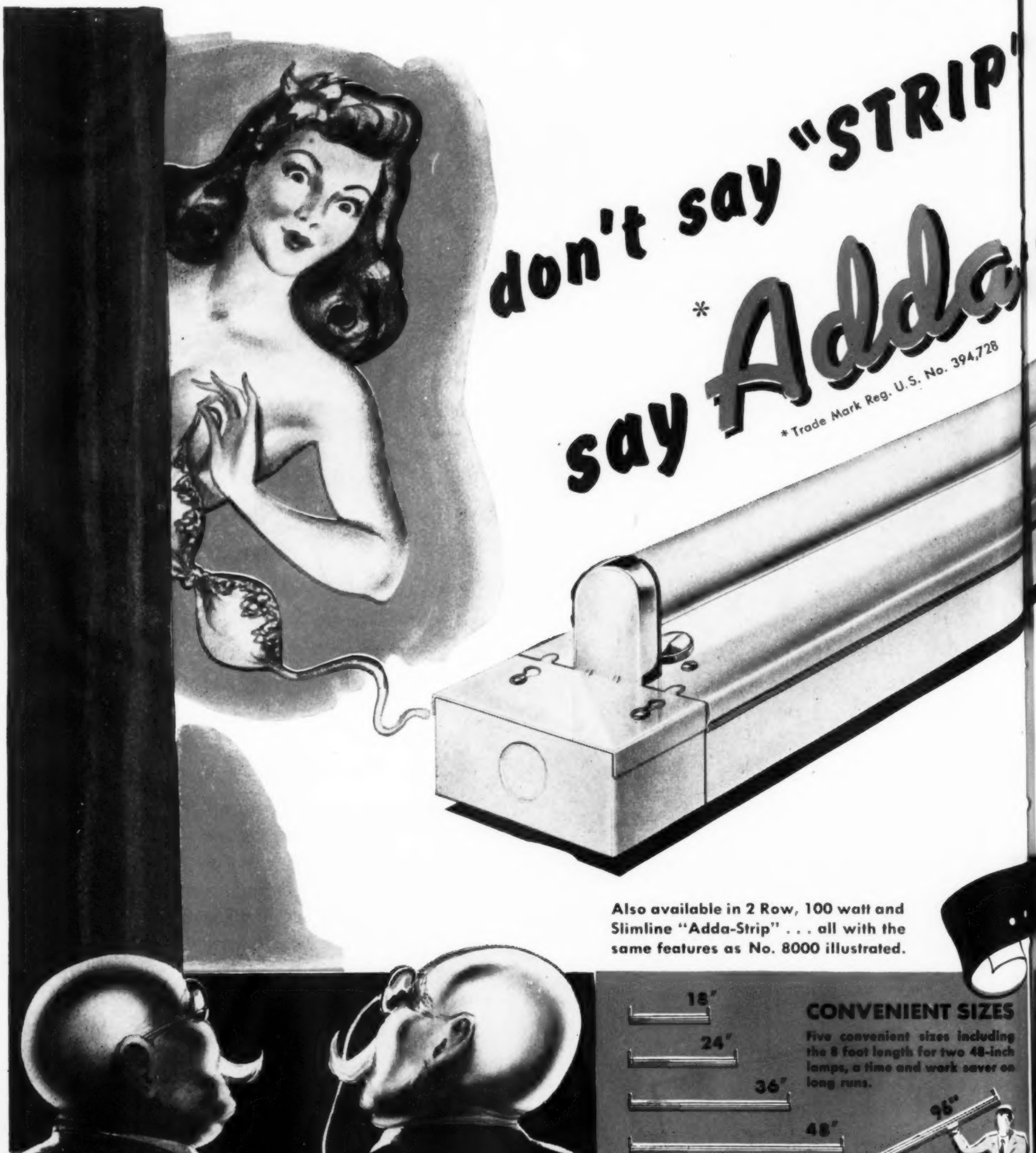
T&B Engineered for easy installation in hard to get at places. All-around pressures on both main and branch are simultaneously applied with simple key wrench. Smooth, compact, one-piece design makes easy handling and taping. T&B Lock-Tite Taps take all mains 1/0 to #1000 MCM; all branches #2 to #1000 MCM—each fitting handling several main and branch sizes.

A small assortment of these Taps and other Lock-Tite Connectors will service all your customers' standard wiring jobs. Sold only through you T&B Distributors.

The Thomas & Betts Co.
INCORPORATED
MANUFACTURERS OF ELECTRICAL FITTINGS SINCE 1898
ELIZABETH 1, NEW JERSEY
In Canada: Thomas & Betts Ltd. Montreal

*Patented

1. **Used as a Parallel Tap—insert branch in either end.**
2. **Used as a Tee Tap—either way is O.K.**
3. **Used as a Two-way connector — takes everything going or coming.**
4. **Used as an Elbow connector—makes sharp ends a cinch.**



don't say "STRIP"

say *Adda

* Trade Mark Reg. U.S. No. 394,728

Also available in 2 Row, 100 watt and Slimline "Adda-Strip" . . . all with the same features as No. 8000 illustrated.

CONVENIENT SIZES

Five convenient sizes including the 8 foot length for two 48-inch lamps, a time and work saver on long runs.

yo
. . The
18"
24"
36"
48"
96"
Cat. No. 8000
8 Foot length for 2 48" lamps

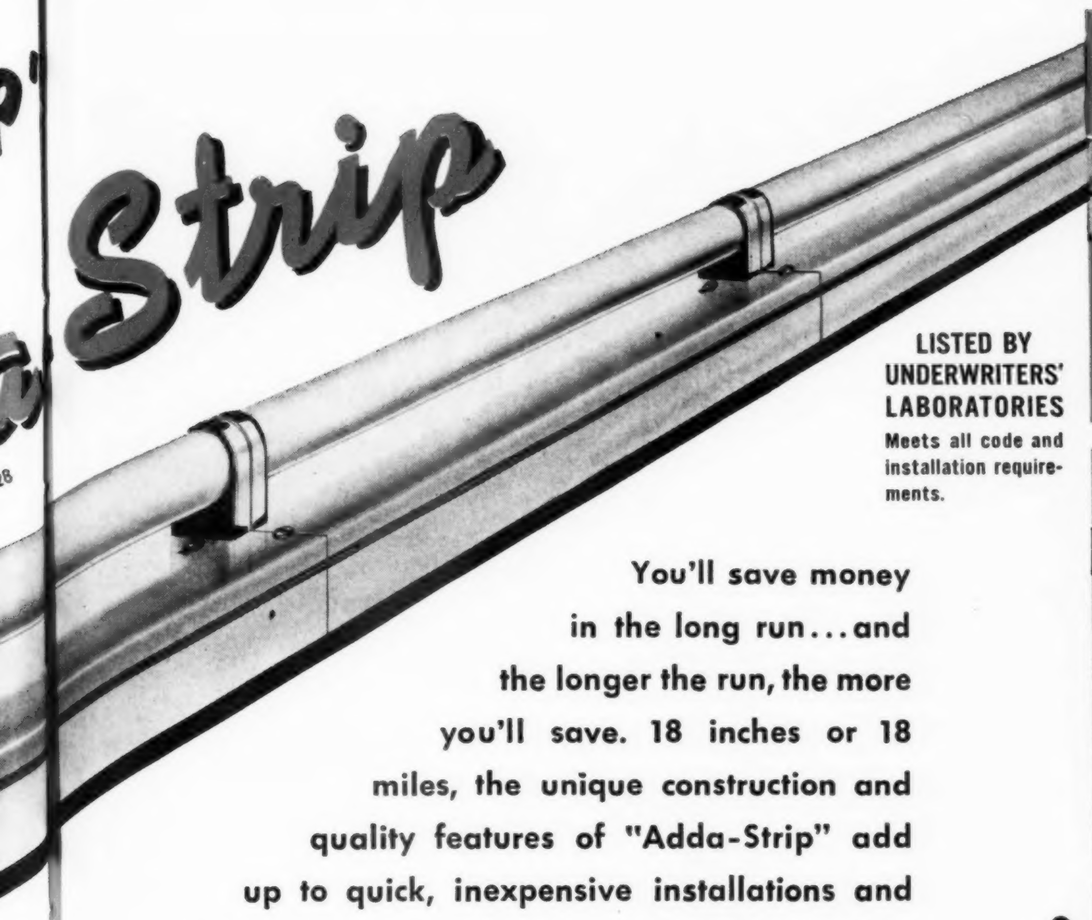
Established 1898

GARDEN CITY PLTG. & MFG. CO.

p'

a

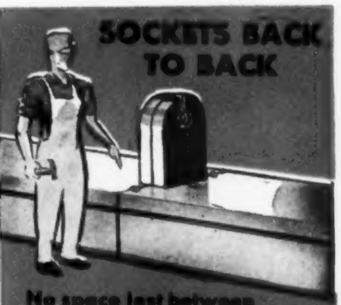
Strip



28

LISTED BY UNDERWRITERS' LABORATORIES

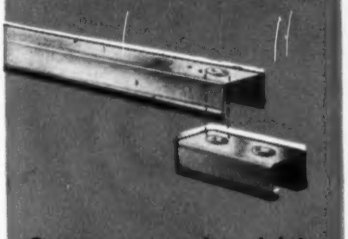
Meets all code and installation requirements.



SOCKETS BACK TO BACK

No space lost between sockets. Single units or long runs, "Adda-Strip" gives you continuous line of light without gaps.

QUICKEST ASSEMBLY



One screw completes joint. "Nest together" embossings line screw holes up automatically.

You'll save money in the long run... and the longer the run, the more you'll save. 18 inches or 18 miles, the unique construction and quality features of "Adda-Strip" add up to quick, inexpensive installations and permanently trouble-free jobs. Take a few moments to learn what "Adda-Strip" offers, and you, too, will resolve to always ask for "Adda-Strip."

COMPLETELY WIRED AND ASSEMBLED

... including starters and E.T.L. approved High Power Factor ballasts

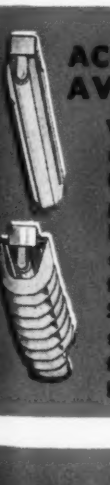
..the ONLY Flourescent Line Lighting Source with All these Features!

ES

ding

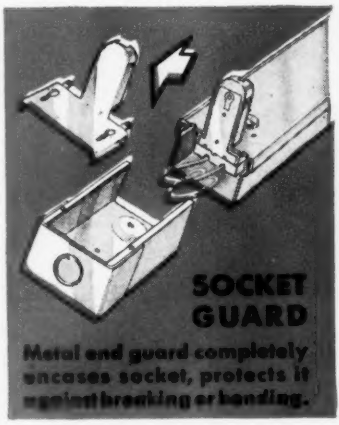
-inch

er on



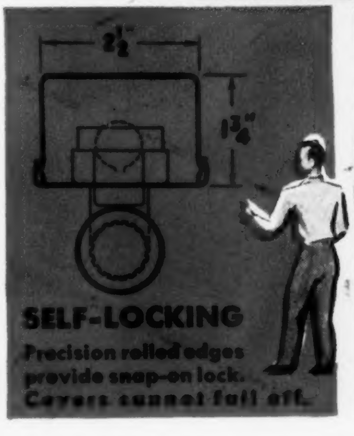
ACCESSORIES AVAILABLE

Well designed reflector strips for every purpose! Complete, hinged louver shields to transform "Adda-Strip" into handsome louver fixtures! Handy! Easy to attach!



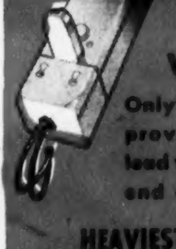
SOCKET GUARD

Metal end guard completely encases socket, protects it against breaking or bending.



SELF-LOCKING

Precision rolled edges provide snap-on lock. Covers cannot fall off.



LEAD WIRES

Only "Adda-Strip" provides No. 14 lead wires on each end of each unit.

HEAVIEST GAUGE METAL

Does not distort or lose its shape.

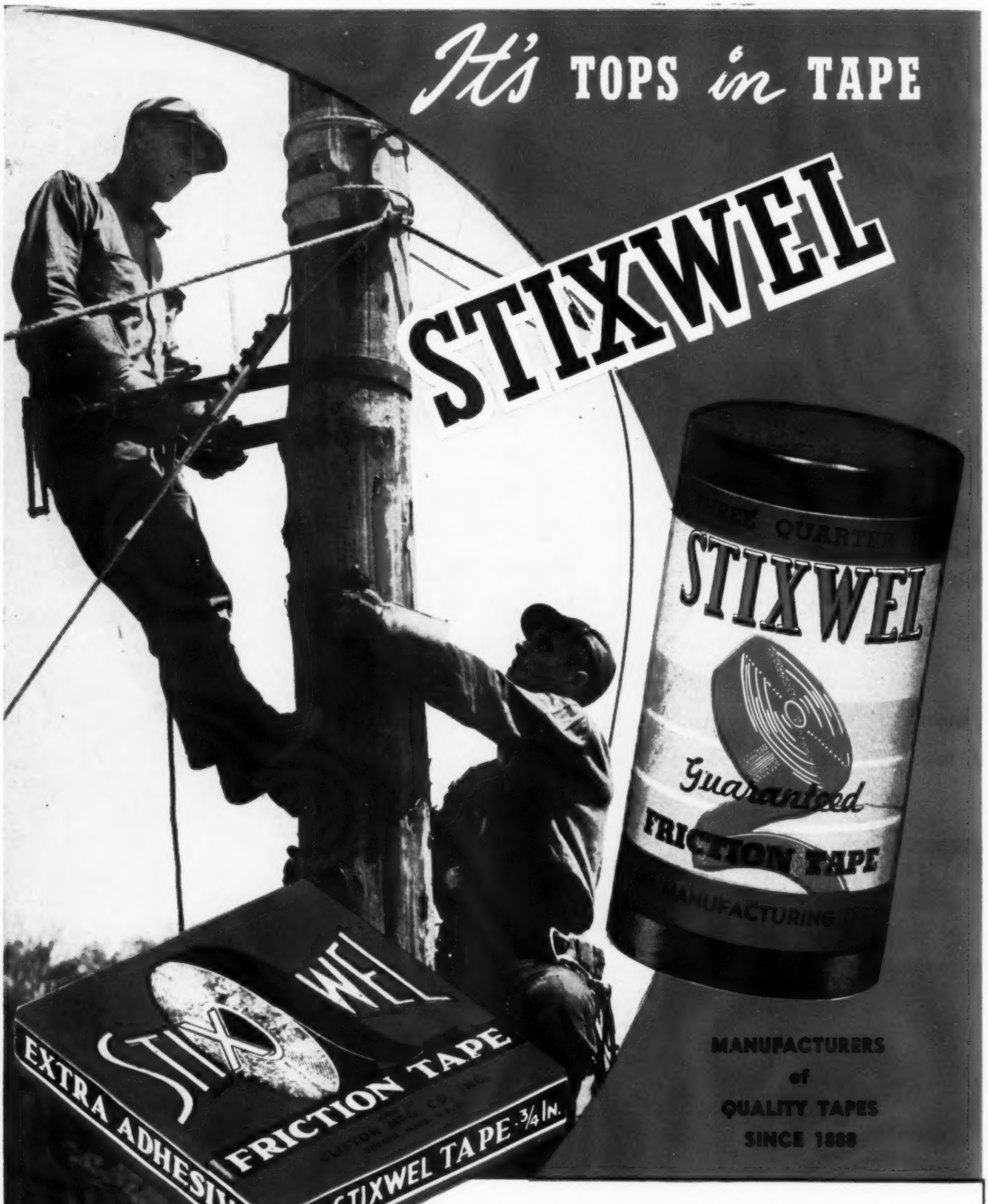
A GARCY PRODUCT

0.

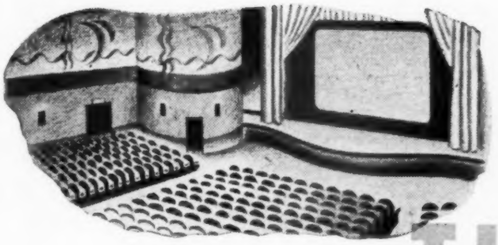
CHICAGO 8, ILL.

Representatives Everywhere

NEW YORK OFFICE
AND WAREHOUSE—600 BROADWAY

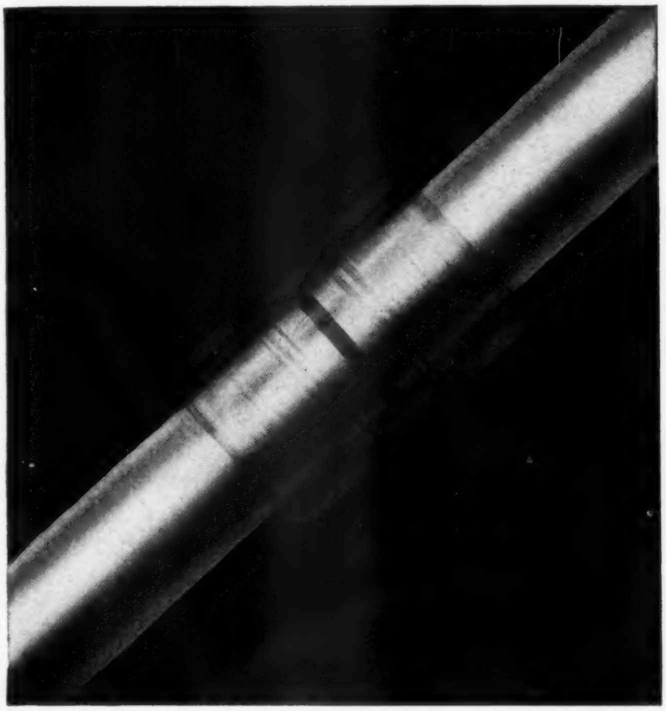

It's TOPS in TAPE
STIXWEL
THREE QUARTER
STIXWEL
Guaranteed
FRICTION TAPE
MANUFACTURING
STIXWEL
FRICTION TAPE
EXTRA ADHESIVE
No 8-STIXWEL TAPE-¾ IN.
CLIFTON MFG. CO. INC.
MANUFACTURERS
of
QUALITY TAPES
SINCE 1888

CLIFTON
MANUFACTURING CO., Inc.
BOSTON 26, MASS.



for Theater Wiring

THE MODERN WAY IS THE ELECTRUNITE WAY



Simple compression-type fitting eliminate any need for thread-cutting with ELECTRUNITE E.M.T. Each coupling contains two locking nuts, which, when tightened with wrench or pliers, make a strong, vibration-proof joint. The protective zinc coating remains unbroken by threads, unmarred by pipe wrench teeth.

ELECTRUNITE E.M.T. PROVIDES PROTECTION OF STEEL—PLUS AN *UNBROKEN* COATING OF ZINC

No need to worry about corrosion troubles when you specify Republic ELECTRUNITE E. M. T., the *original* lightweight rigid steel raceway that provides continuous, unbroken corrosion protection throughout the entire raceway installation.

Unlike other types of conduit, modern ELECTRUNITE E. M. T. never requires thread-cutting or turning into the fitting. Hence, its tightly adherent zinc coating remains unbroken at coupling and box connector—unmarred, too, by biting pipe wrench teeth.

This is but one of the many reasons why easy-to-install ELECTRUNITE E. M. T. merits the Underwriters' Laboratories inspection seal, indicating that it provides adequate mechanical and electrical protection . . . reason also why it is approved by the National Electrical Code for exposed, concealed and concrete slab construction.

REMEMBER: You can be sure that any wiring job is safe when it's run through dependable, long-lasting raceways of ELECTRUNITE E. M. T. Like more information? See your nearest ELECTRUNITE Distributor, or write to:

REPUBLIC STEEL CORPORATION
STEEL AND TUBES DIVISION • CLEVELAND 8, OHIO
Export Department: Chrysler Building, New York 17, New York

YOUR CUSTOMERS—contractors and maintenance men—and the architects who specify electrical raceway materials, see this and similar advertisements which appear *regularly* in ELECTRICAL CONTRACTING, PROGRESSIVE ARCHITECTURE and ELECTRICAL EQUIPMENT.

Republic
REPUBLIC STEEL
REG. U. S. PAT. OFF.
ELECTRUNITE E.M.T.
REG. U.S. PAT. OFF.

LIGHTWEIGHT THREADLESS RIGID STEEL RACEWAY

IT'S ACCURATE!

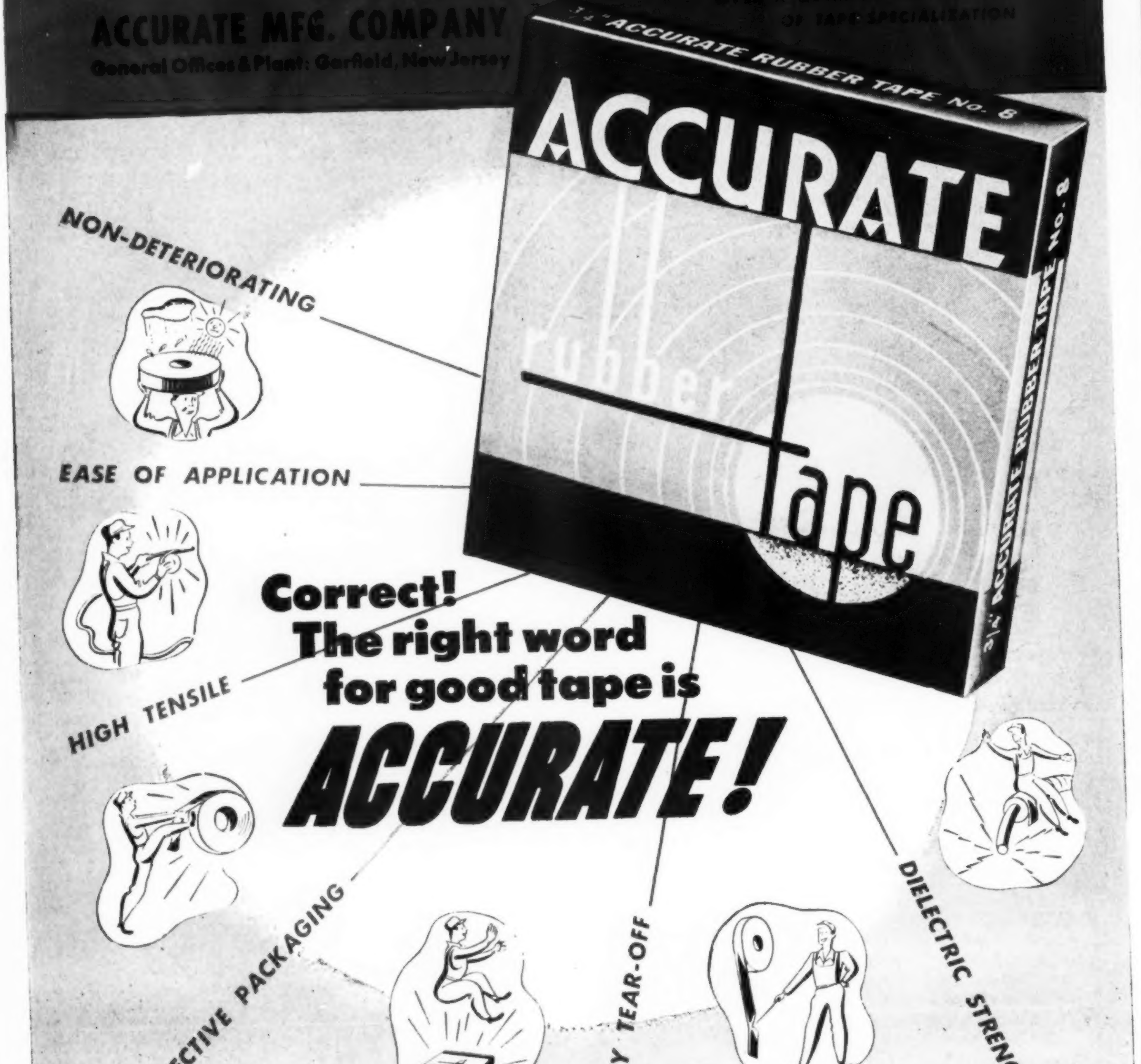
... tapes that mean sales and sales that mean profits!

If you want to know why ACCURATE tapes are such consistently good sellers and profit builders, just take a package down off your shelf and open it. Note that fresh, clean smell ... it means tape that's fresh and tacky.

Now strip off a couple of inches—check the high adhesion and split proof strength, the non-raveling edges of ACCURATE tape. That is what the trade wants, and what the trade demands—from coast to coast. Follow your customer's lead — stock these fast moving ACCURATE tapes — friction and rubber — and do yourself and your trade a good turn. They are backed by nation-wide advertising reaching every important user of tape . . . powerful sales boosting promotion that spells greater profits for you!

OVER A QUARTER CENTURY
OF TAPE SPECIALIZATION

ACCURATE MFG. COMPANY
General Offices & Plant: Garfield, New Jersey


3/4" ACCURATE RUBBER TAPE No. 8
ACCURATE
rubber
Tape
3/4" ACCURATE RUBBER TAPE No. 8
NON-DETERIORATING
EASE OF APPLICATION
HIGH TENSILE
PROTECTIVE PACKAGING
EASY TEAR-OFF
DIELECTRIC STRENGTH

Correct! The right word for good tape is ACCURATE!

A NEW FUSE!

Time t-d delay

RENEWABLE

TODAY'S SHAWMUT SHUR-LAG FUSE

FOR 250 VOLTS OR LESS
SHAWMUT
Time t-d delay
RENEWABLE
TYPE & AMP
RF 200
THE CHASE SHAWMUT CO
NEWBURYPORT MASS.

Listed by Underwriters' Laboratories, Inc.

THE greatest progress in the renewable fuse in years. All parts are precision made and interchangeable. They can be completely disassembled and reassembled. With a supply of parts, you can assemble or refit your own fuses.

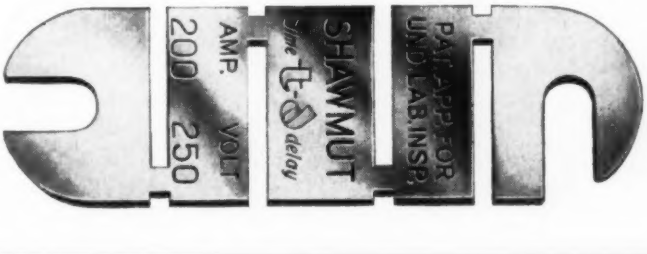
A T-D renewable fuse with a T-D link has the best time-delay characteristic of any renewable fuse, because it gives maximum time-delay in the higher current ranges where most needed, while still giving maximum protection in the overload zone.

It is the coolest renewable fuse, with the lowest heat and pressure when it blows. There are no steel parts. Ample metal surfaces, with high thermal absorption capacity, cool the gases generated by interruption.

On short circuit, the T-D link blows instantly on one notch, and the other notches follow in succession, operating like a four-step rheostat. This reduces the rate of rise in recovery voltage, and protects insulation and wiring.

The T-D is the simplest, sturdiest and most serviceable renewable fuse, and the easiest and speediest to renew. Only a pair of pliers are needed to renew it, after it has blown many times.

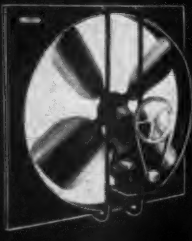
These are only a few of the advantages that establish the T-D in a place by itself among renewable fuses. Ask about them all. An inquiry of us or our nearest representative will bring you full information.



THE CHASE-SHAWMUT COMPANY, NEWBURYPORT, MASS.

Boston, New York, Syracuse, Cleveland, Philadelphia, Pittsburgh, Baltimore,
Atlanta, New Orleans, Dallas, Detroit, Columbus, Indianapolis, Chicago, Omaha,
Kansas City, St. Louis, Minneapolis, Denver, Los Angeles, San Francisco, Seattle.

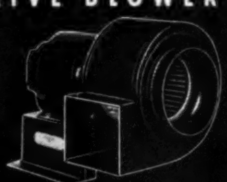
BERNS AIR KING



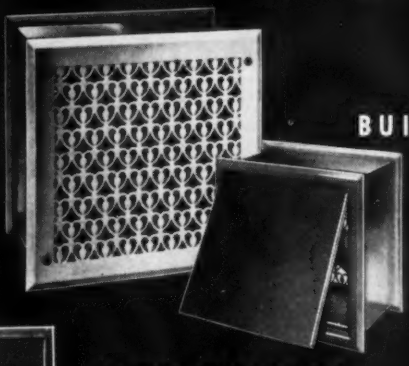
BELT DRIVEN EXHAUST FAN

Economical ventilation for commercial, industrial and attic purposes. Moves large quantities of air quietly and efficiently. Rugged, sturdy, built to last.

DIRECT DRIVE BLOWER

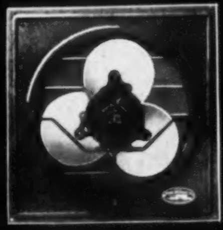


Perfect for ventilating, heating and air conditioning systems. Designed for long years of service. . , with husky standard make motor and heavy gauge steel construction throughout.



BUILT-IN TYPE FULLY AUTOMATIC KITCHEN VENTILATING FAN

Starts and stops with simultaneous opening and closing of outside door by merely pressing a switch! Beautiful grill in gleaming white enamel or polished chrome. Heavy duty, extra quiet motor. Adjustable to wall thickness. The perfect fan for every new home construction. At an unusually low price. Pull chain type same construction as fully automatic fan also available at unbelievably low cost.



DE LUXE EXHAUST FAN

with Automatic Shutters Attached

Beautiful in appearance with tremendous sales appeal. Rugged, heavy gauge steel frame with welded joints. Heavy duty standard make motor. Every feature you could want, including a lower price.

SHORT PEDESTAL AIR CIRCULATOR

Big, dynamically balanced blades and powerful sleeve bearing motor moves large quantities of air quietly and efficiently. Smart wrinkle finish; chrome guard and trim. Fine for office, factory or store.

3 BIG ADVANTAGES

That Make This the Fastest Selling Fan Line With the Country's Leading Jobbers

1. **STYLE AND PERFORMANCE** Attractive appearance and efficient operation eliminates sales resistance.
2. **GUARANTEED QUALITY** All fan parts completely Berns Built and Engineered.
3. **LOWER PRICES** Easier Sales—Higher Profits.

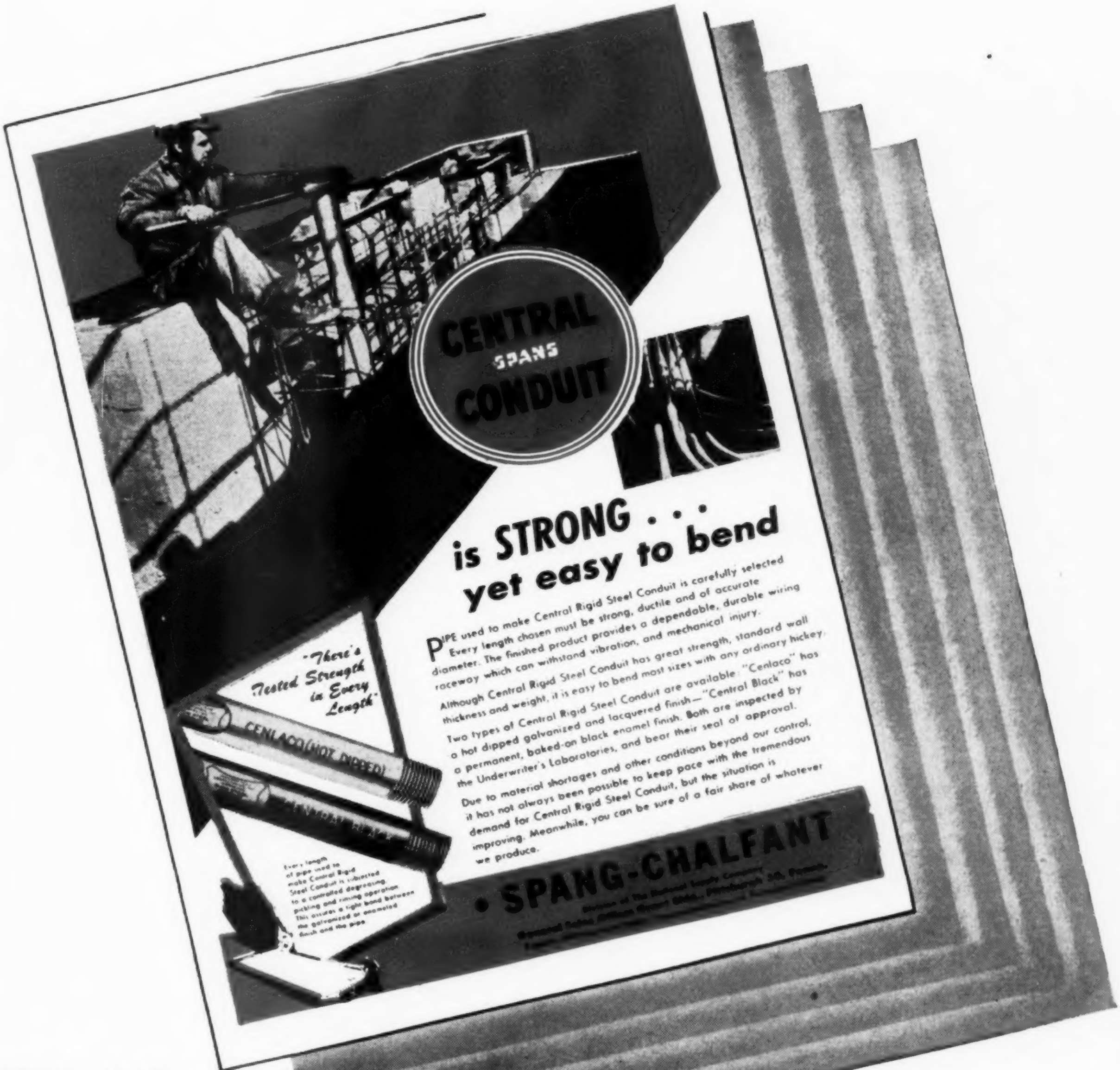
At last you can be sure of the quality of every fan you buy . . . in a complete line of fast selling, high profit fans for almost every purpose. From the all-steel frame to the dynamically balanced aluminum blades, quality and economy are built in at the Berns plant. Berns' complete production facilities give you lower sales-appealing prices to help you meet and beat all competition. WRITE FOR PRICES AND LITERATURE ON COMPLETE LINE AND DISTRIBUTORSHIP DETAILS.

SOLD EXCLUSIVELY THROUGH LEADING ELECTRICAL WHOLESALERS

EXHAUST FANS • AIR CIRCULATORS • BLOWERS • BELT DRIVEN FANS

BERNS MFG. CORPORATION, 2278 Elston Ave., CHICAGO 14, ILL.

FORMERLY BERNS SPECIALTY MFG. CO.


CENTRAL
SPANG
CONDUIT
"There's Tested Strength in Every Length"
CENLACO (HOT DIPPED)
CENTRAL BLACK
Every length of pipe used to make Central Rigid Steel Conduit is subjected to a controlled degreasing pickling and rinsing operation This assures a tight bond between the galvanized or enameled finish and the pipe

is STRONG . . . yet easy to bend

PIPE used to make Central Rigid Steel Conduit is carefully selected. Every length chosen must be strong, ductile and of accurate diameter. The finished product provides a dependable, durable wiring raceway which can withstand vibration, and mechanical injury.

Although Central Rigid Steel Conduit has great strength, standard wall thickness and weight, it is easy to bend most sizes with any ordinary hickey.

Two types of Central Rigid Steel Conduit are available: "Cenlaco" has a hot dipped galvanized and lacquered finish—"Central Black" has a permanent, baked-on black enamel finish. Both are inspected by the Underwriter's Laboratories, and bear their seal of approval.

Due to material shortages and other conditions beyond our control, it has not always been possible to keep pace with the tremendous demand for Central Rigid Steel Conduit, but the situation is improving. Meanwhile, you can be sure of a fair share of whatever we produce.

• SPANG-CHALFANT

THIS ADVERTISING . . .

REACHES NEW BUYING INFLUENCES

Positions in American Industry are not static. Every day men start new jobs — others move up to bigger responsibilities — and many retire. This presents a problem to all sales organizations.

Spang recognizes how important it is to reach out and sell the new buying influences that daily move into prominence in the industrial scene. That's why, even though there is a tremendous demand for Central Rigid Steel Conduit, Spang advertising continues to appear regularly in trade papers read by your customers and future prospects.

Spang has a very earnest desire to aid the distributors of its products by helping them to protect their present and future business and to do everything possible to produce greater quantities of Central Rigid Steel Conduit.

SPANG-CHALFANT

DIVISION OF THE NATIONAL SUPPLY COMPANY

General Sales Offices: Grant Bldg., Pittsburgh 30, Penna.

District Offices and Sales Representatives in Principal Cities

This fixture is
AVAILABLE NOW

Suave and smart, suitable for any interior, home, office or shop. Always in good taste, this fluorescent fixture opens up a variety of new opportunities where it fills immediate needs.

Departing from old techniques it introduces new technique in construction, material and design.

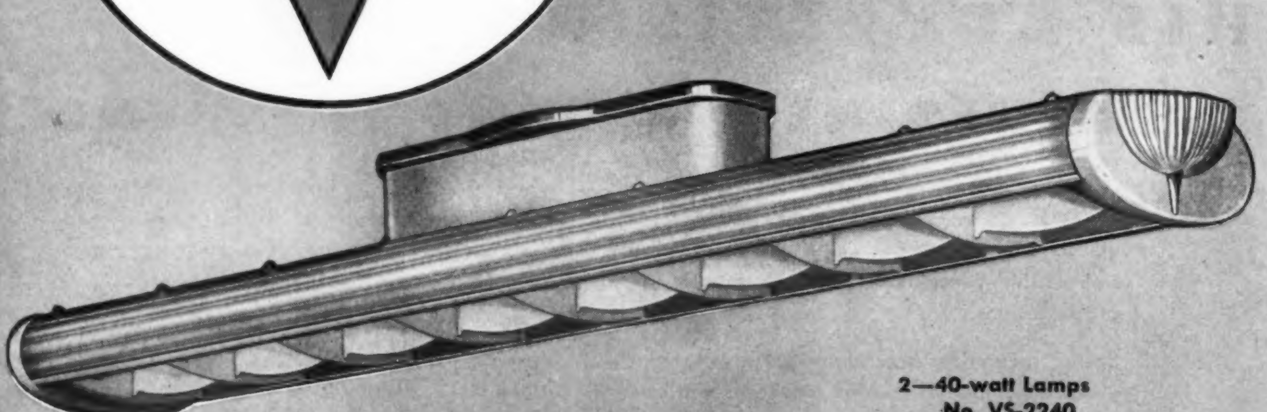
Light in weight, it does not sacrifice a single element of strength. Engineered for greatest efficiency, no light is trapped or wasted. A product of advanced concepts in the use of plastics, all important plastic lines are *lines of light*. Ingenious shielding, which never has to be removed for replacing lamps, contributes to light volume and gives broad distribution of a beautiful quality of light.

Other features deserving attention

Approved by Underwriters • Power factor corrected
Easy to relamp
Beautifully finished with Hibake enamel for high reflection factor
Modestly decorated with polished chromium.

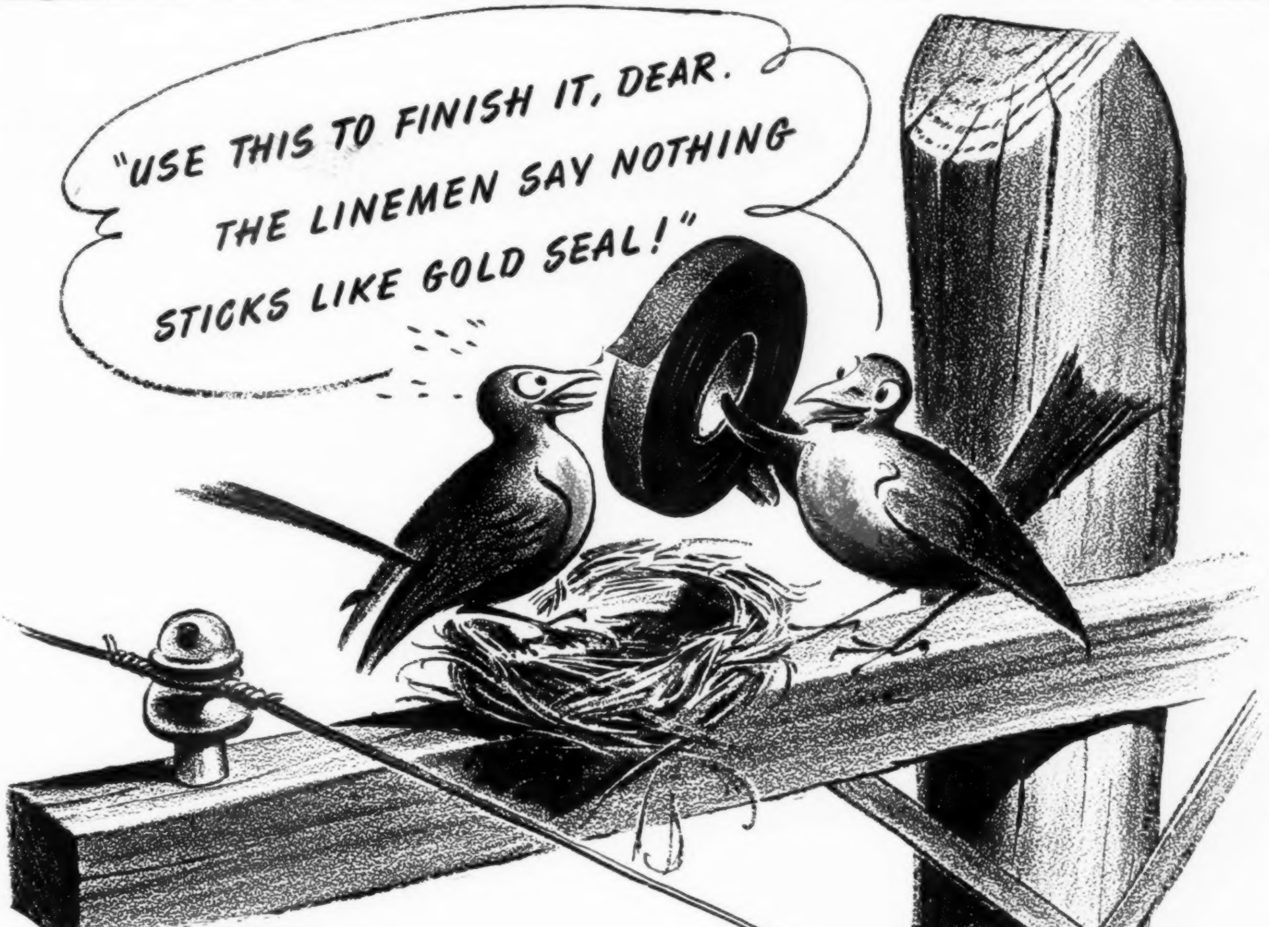
Your Virden distributor can supply you promptly

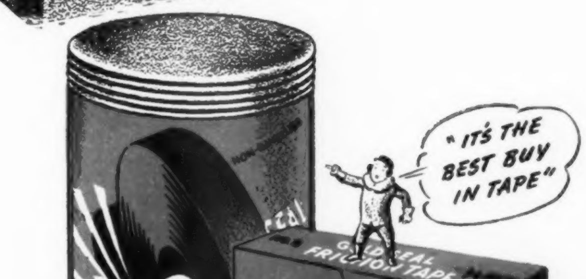
VIRDEN VALUE



2—40-watt Lamps
No. VS-2240
Wired complete with starter switches
Weight packed 24 lbs.

John C. Virden Company • Cleveland, Ohio
Member of Home Lighting Institute


"USE THIS TO FINISH IT, DEAR. THE LINEMEN SAY NOTHING STICKS LIKE GOLD SEAL!"


"IT'S THE BEST BUY IN TAPE"
GOLD FRICTION
GOLD SEAL FRICTION TAPE
NON-RAVELLING
SEAL TAPE
LASTING ADHESIVE QUALITY
TRADE JENKINS MARK
Jenkins Bros.
MANUFACTURED BY
SEAL

Jenkins Bros. also make Diamond Seal Friction and Rubber Tapes which meet ASTM and Federal Specifications.

YOUR CUSTOMERS can expect a lot more from Gold Seal than they would ever expect from ordinary tape. It makes a tighter, longer-lasting bond . . . a neater, faster job . . . because it always has plenty of "tack" in the friction compound.

What's more Gold Seal Tape never dries out or becomes gooey . . . never peels, ravels, or smears their hands. And they can depend on its high dielectric strength.

It will pay you to push Gold Seal for extra business . . . repeat business . . . new customers. Stock it in single rolls and the handy, sealed 10 roll container. It's backed by aggressive advertising and a famous name. Jenkins Bros. (Rubber Div.), 80 White Street, New York 13.

JENKINS

TRADE JENKINS MARK
Jenkins Bros.

Gold Seal Tape

FRICTION and RUBBER TAPES

MADE BY JENKINS BROS. . . . MAKERS OF FAMOUS JENKINS VALVES

FOR HEAVY DUTY HEATING

Thermador
MASTER
HEAT FAN

POTENT *and* PORTABLE

Powerful as the famous built-in Thermador Wall Heaters, yet easily portable, the new Thermador Master Heat Fan is ideally suited for factories, offices, schools and homes where adequate wiring is available and portability is desirable.

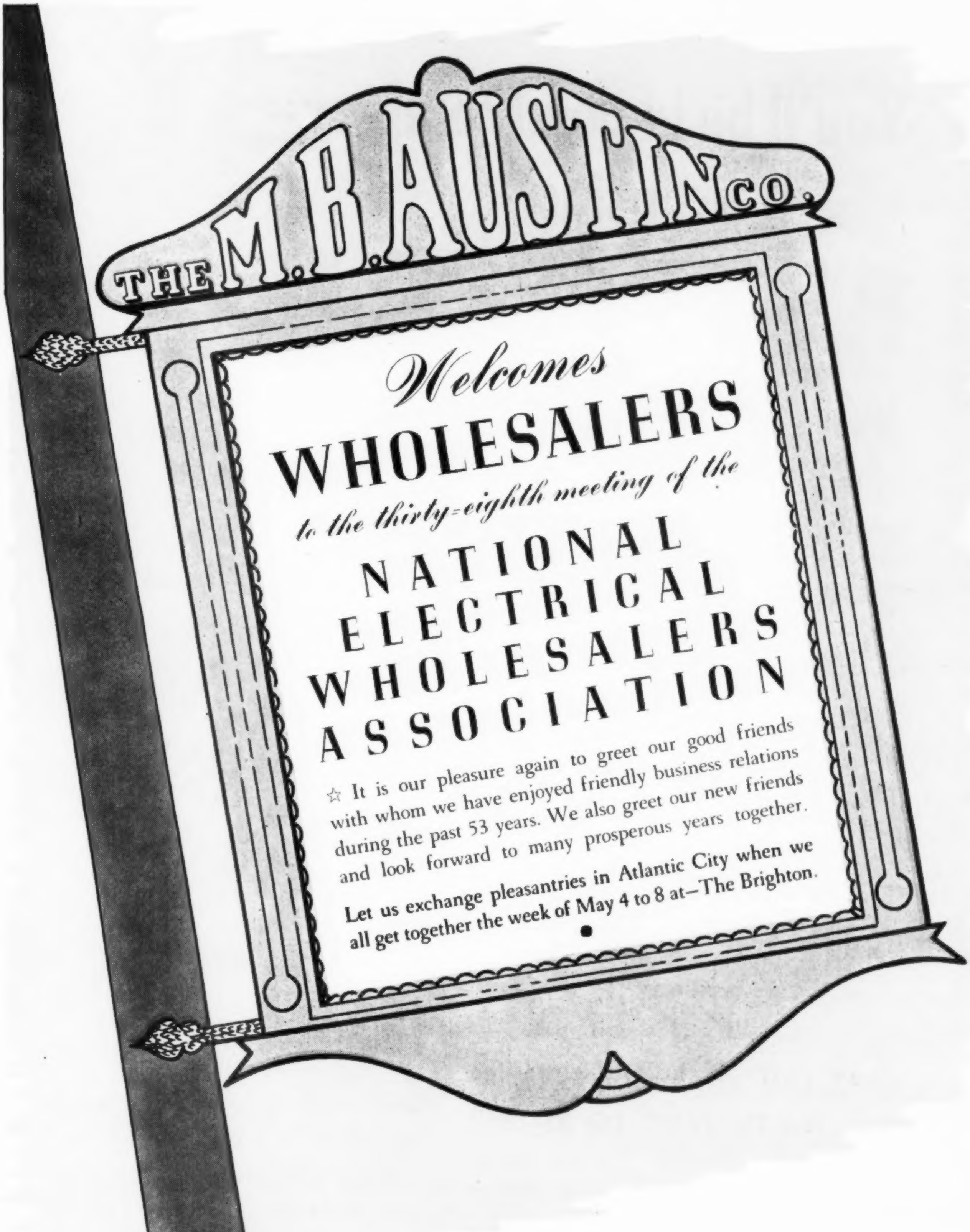
Instantly, without drafts, the Thermador Master Heat Fan floods the vital "living zone" of a room with fumeless heat. Comfortable, even temperatures are easily maintained . . . cold and dead air pockets eliminated. The four-way switch covers half-heat, full heat, fan and off positions; safety feature cuts off heater if air current is obstructed. Long-life, pre-tested mechanical construction, beautifully finished case with modern carrying handle . . . eight foot cord with polarity plug. Available in three models with manual control, three with Thermador thermostat, from 3,000 to 5,000 watts for 230 volt, 50/60 cycle AC.

Cools too!

Year' round guardian of healthful comfort, the Master Heat Fan does double duty for summer coolness! With heating element turned off, the noiseless fan runs at high speed providing complete circulation of air throughout the vital "living zone" area.

Thermador
SEVEN LEAGU AHEAD
ELECTRICAL APPLIANCES

THERMADOR ELECTRICAL MANUFACTURING COMPANY • LOS ANGELES 22, CALIFORNIA


THE M. B. AUSTIN CO.

Welcomes

WHOLESALERS

to the thirty-eighth meeting of the

NATIONAL ELECTRICAL WHOLESALERS ASSOCIATION

☆ It is our pleasure again to greet our good friends with whom we have enjoyed friendly business relations during the past 53 years. We also greet our new friends and look forward to many prosperous years together.

Let us exchange pleasantries in Atlantic City when we all get together the week of May 4 to 8 at—The Brighton.

●

THE M. B. AUSTIN COMPANY

108-116 S. DESPLAINES STREET

Chicago 6, Ill.

You'll be in good company using PLASTICON WIRE AND CABLE

TO LEADING WIRE AND CABLE USERS EVERYWHERE
PLASTICON
THE PLASTIC WIRE & CABLE CORPORATION

WHAT CAN ANY INSULATION DO THAT PLASTIC CAN'T DO BETTER?

Plastic insulation is a basic permanent improvement because of its inherent qualities and its adaptability to almost any insulation requirement.

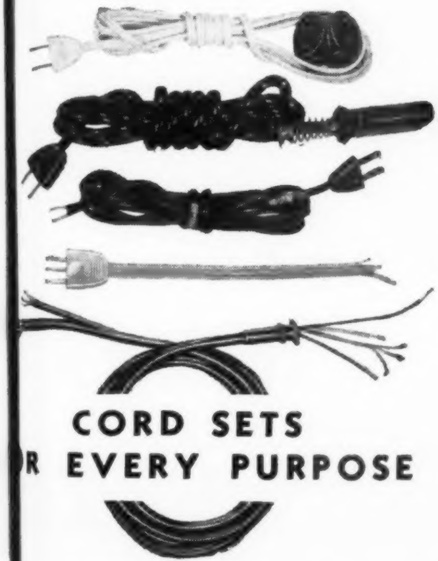
PLASTICON stands for plastic-insulated wire and cable manufactured to the highest standards by Plastic Wire & Cable Corporation — world's largest exclusive producer and pioneer of progress in plastic-insulated conductors. Plastic Wire & Cable engineers are continually expanding the development of plastic compounds to meet the specialized needs of wire and cable users.

PLASTIC
PLASTIC
PLASTICON
BUILDING WIRE
PLASTIC
PLASTIC
PLASTIC
PLASTIC
PLASTIC
PLASTIC
PLASTIC
PLASTICON

PLASTICON

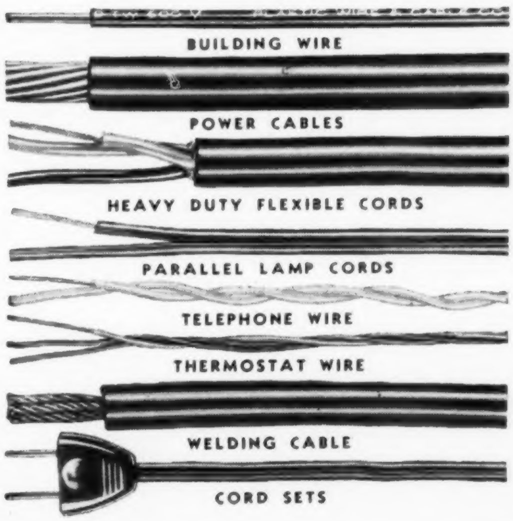
10 WAYS BETTER

1. Greater dielectric strength.
2. Cannot fray, crack or rot.
3. Low moisture absorption.
4. Greater mechanical strength.
5. Higher abrasion resistance.
6. Flexibility at all temperatures.
7. High chemical resistance.
8. Wide range of permanent gem-like colors.
9. Non-combustible.
10. Lasting appearance.


CORD SETS
FOR EVERY PURPOSE

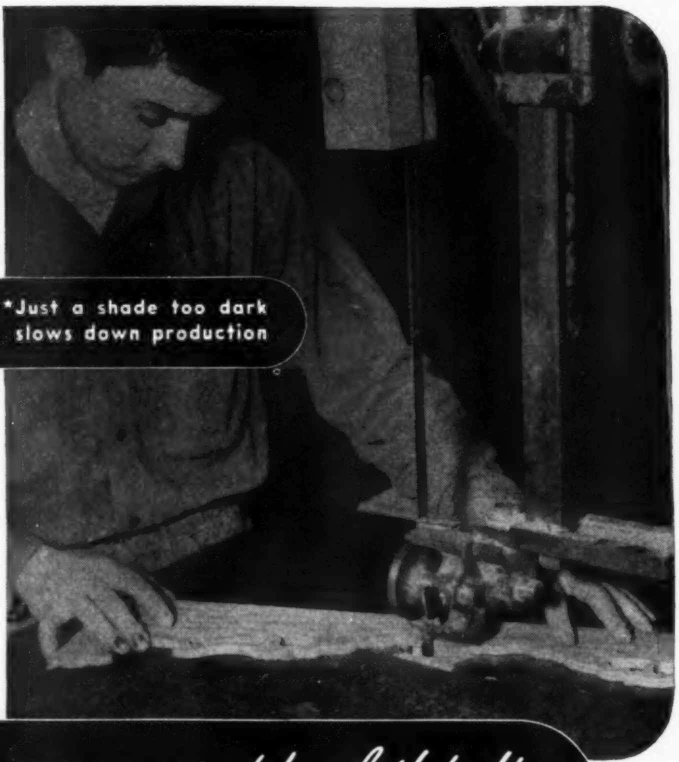
DECIDE FOR YOURSELF!

Our booklet of technical data is packed with facts about the mechanical and dielectric characteristics, resistance to chemicals, aging properties, and other important data of interest and importance to all users of wire and cable. Write for your free copy today, or explain your requirements and let us tell you how PLASTICON can meet them. Plastic Wire & Cable Corporation, 406 East Main Street, Jewett City, Connecticut.


BUILDING WIRE
POWER CABLES
HEAVY DUTY FLEXIBLE CORDS
PARALLEL LAMP CORDS
TELEPHONE WIRE
THERMOSTAT WIRE
WELDING CABLE
CORD SETS

Borderline Vision*

shades manufacturing profits



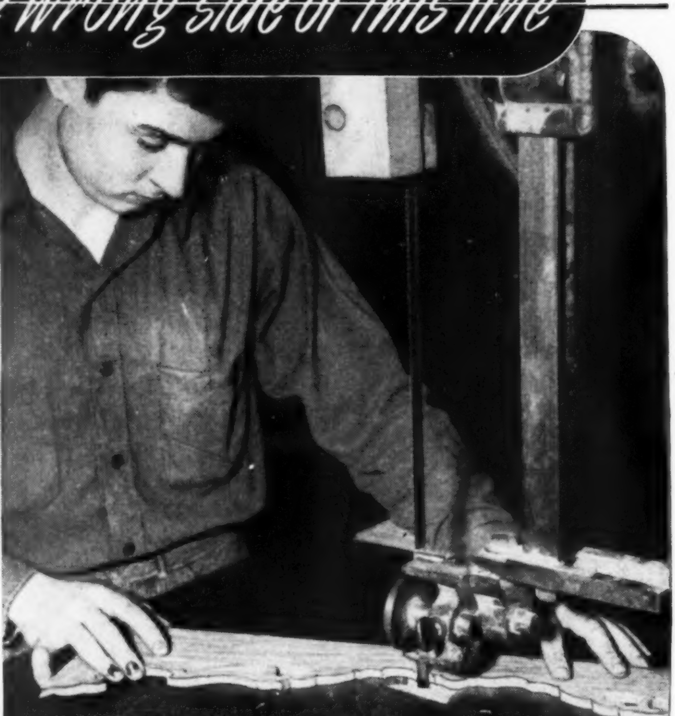
● GOOD LIGHTING today is an important production tool. But the difference between good lighting in industry and Borderline Vision—lighting that's just a shade too dim—is often hard to see at a glance.

The best lighting today pays manufacturers dividends in increased, *better* work—better employee morale—and decreased costs. Wheeler engineers have been paying these dividends to industry through Wheeler Skilled Lighting ever since 1881. Wheeler Reflectors give maximum illumination from standard lamps

Too many plants are on the wrong side of this line

because they *control* light. Their high reflection factor puts light to work where it belongs—on the job.

The real difference between good lighting and Borderline Vision shows in production figures when Wheeler Skilled Lighting is put to work in a plant. **Wheeler Reflector Co., 275 Congress St., Boston 10, Mass.** Also New York and principal cities.



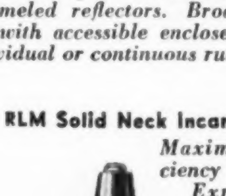
Distributed Exclusively Through Electrical Wholesalers

All-Steel Fluorescent Unit

For 2 or 3 40-watt, or 2 100-watt lamps. Available with open or closed end porcelain enameled reflectors. Broad wiring channel with accessible enclosed ballast. For individual or continuous runs.

RLM Solid Neck Incandescent Reflector

Maximum lighting efficiency indoors or out. Expertly designed, ruggedly built. Vitreous enamel only. 75 to 1500 watts.



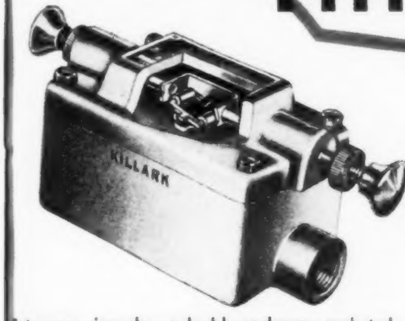
Wheeler REFLECTORS

SKILLED LIGHTING

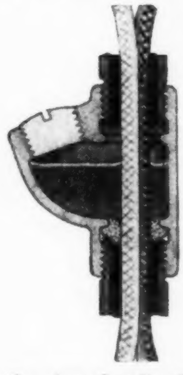
MADE BY SPECIALISTS IN LIGHTING EQUIPMENT SINCE 1881

o meet rigid specifications for hazardous locations—

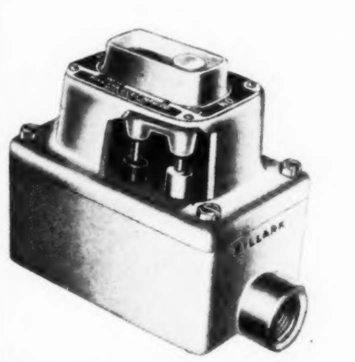
KILLARK Explosion-Proof Fittings



ut-away view shows double enclosure, gasketed nd sealed to eliminate exposed arcing and revent entry of fumes, dust and gas.



ross section view of sealing fitting (required by lectrical code) used to seal off conduit runs from erminals where arcing or sparking is likely to ccur.



ouble button, single pole motor-starting switch ith cutaway to show gasketed and sealed dou- le enclosure.

Much of the plant expansion and new industrial construction now going on includes locations such as paint spray booths, etc., where inflammable or explosive materials must be handled, or where the air will contain inflammable or explosive gas, vapor or dust. Wiring installations for these locations require explosion-proof fittings. You can get your share of this profitable business and take these installations right in stride with Killark's complete line of approved explosion-proof fittings.

for: chemical plants . . . refineries . . . oil and gas storage depots . . . explosive plants and warehouses . . . shoe factories . . . mines . . . aircraft plants . . . airports . . . plastic plants . . . paint and solvent factories . . . hospitals . . . grain mills.

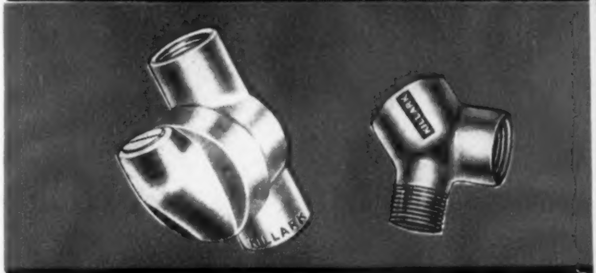
For wiring every type of hazardous location, Killark manufactures a complete line of explosion-proof junction boxes, switches, lights, connectors and sealing fittings. Killark Explosion-Proof fittings are manufactured in accordance with conditions specified in Article 500, National Board of Fire Underwriters Pamphlet No. 70, 1940.

Do you have the Killark Catalog complete with the full line of Explosion-Proof Fittings? We'll send it on request.

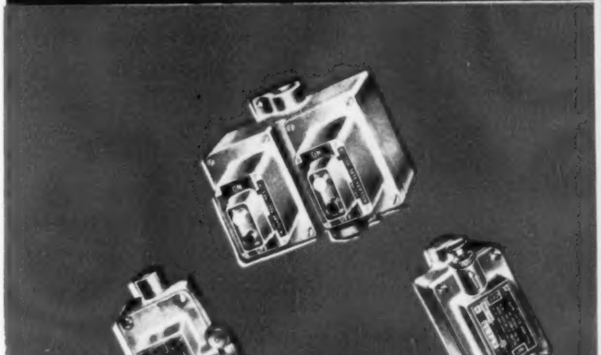
SOME OF THE MANY KILLAR EXPLOSION-PROOF FITTING

EXPLOSION-PROOF LIGHTS

CONDUIT BODIES



SEALING FITTINGS



SWITCHES

KILLARK ST. LOUIS

Killark

ELECTRIC MANUFACTURING COMPANY

Offices and Warehouses: Atlanta, Baltimore, Boston, Chicago, Denver, Los Angeles, Pittsburgh, San Francisco, Seattle and Syracuse. Offices: Cincinnati, Cleveland, Dallas, Detroit, Kansas City, Minneapolis, New York, Philadelphia.

Vandeventer & Easton Ave.
SAINT LOUIS 13, MO.

Safe
NITE-T-LITE
JUST PLUG IN.
110-120 VOLT A.C. or D.C.
35¢ each
THREE for $1.00
COST LESS THAN
1¢ A MONTH TO OPERATE
Another LITTELFUSE Product
4757 N. RAVENSWOOD AVE.
CHICAGO 40 ILLINOIS

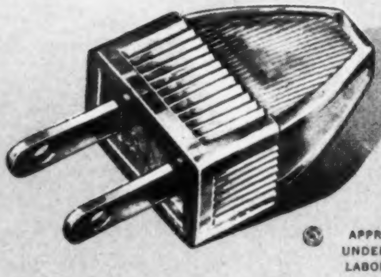
STRIKING NEW NITE-T-LITE COUNTER DISPLAY MAKES SALES AUTOMATICALLY

Place this colorful new display, with its 24 Nite-T-Lites, in a busy customer-traffic spot. It works like magic, making sales without time or effort on your part.

Encore!

more GLOW for more sales and profits as Littelfuse scores again with a better

NITE-T-LITE*



APPROVED BY UNDERWRITERS' LABORATORIES

Sales quickly climbed to the 3,350,000 mark when Nite-T-Lite first was introduced. Now, the new improved version of this amazing neon-glow light heads for even greater popularity. Its glow is bigger, and better diffused. An attractive etch-effect design conceals the element, and prevents glare.

Approved by Underwriters' Laboratories, and leading safety authorities, Nite-T-Lite operates for up to six months for a penny. Just plug it into any 110 to 125 volt AC or DC wall plug or receptacle and it burns continuously for up to a year. Nite-T-Lite's friendly glow safely guides family and guests in darkened halls, bathrooms, bedrooms, and all through the house.

Order a supply today and cash in as Nite-T-Lite catches its second sales-wind and records another smashing merchandising success.

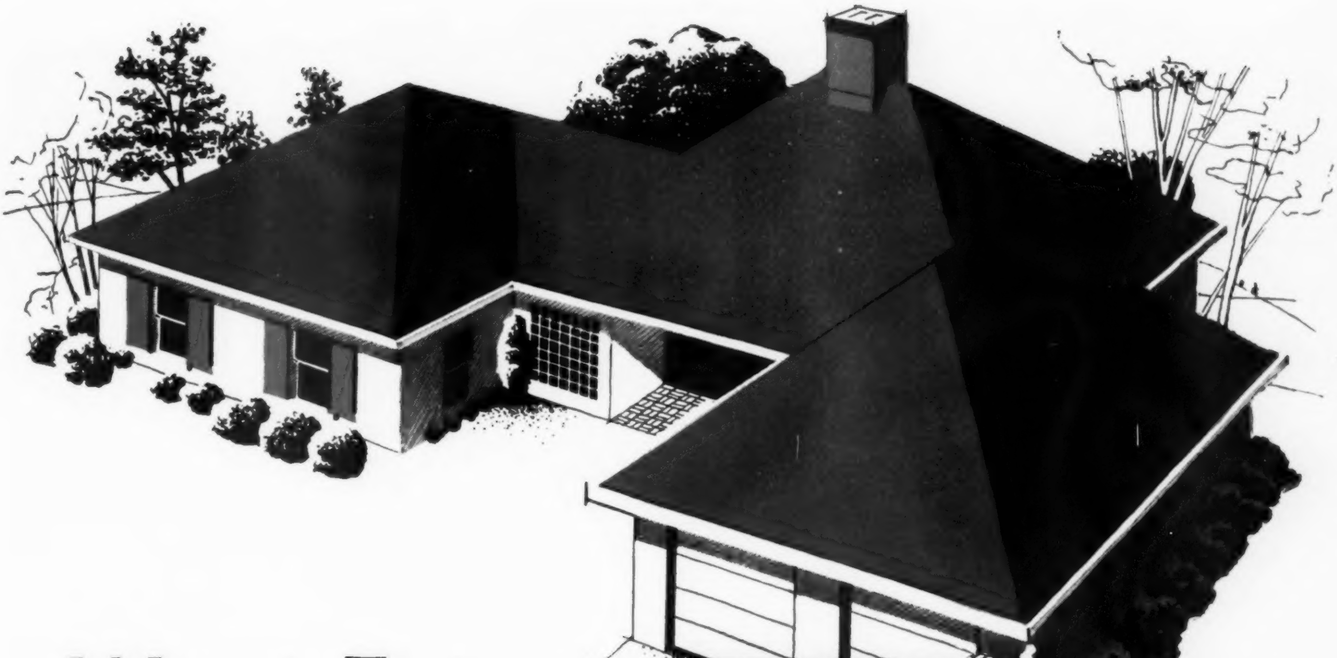
* REG. U. S. PAT. OFF.—PAT. NO. 144877

LITTELFUSE *Incorporated*

FIRST IN CIRCUIT PROTECTION

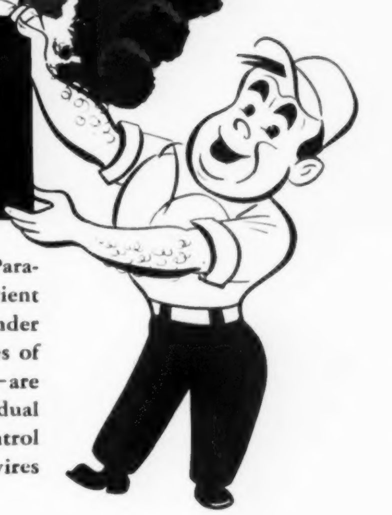
4787 E. RAVENSWOOD
CHICAGO 40, U. S. A.

FUSES, MOUNTINGS AND ACCESSORIES • CIRCUIT BREAKERS • SWITCHES • NITE-T-LITE • SWITCH-LITE • IGNITION-FRITZ • NEON INDICATORS

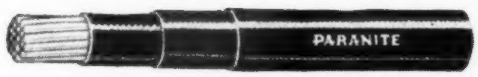


Wired Today–for 1997!

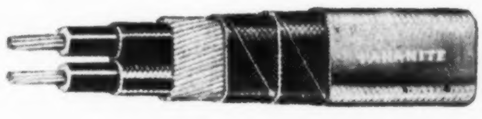
Statistical
Quality
Control



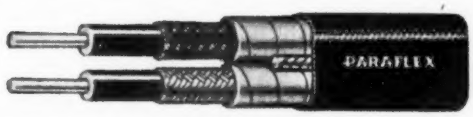
IF IT'S **PARANITE** IT'S RIGHT! . . . . That's why new 1947 homes wired with Paranite Building Wire—Paraflex—ABC Cable—Service Cable—will have the same efficient electrical service in 1997 and beyond! For every bit of Paranite wire or cable is made under the watchful eye of SQC—Statistical Quality Control! Nothing is left to chance—scores of tests, graphs, measurements—figures and figures—by columns and rows of columns—are drilled and marshalled by our statisticians—are compiled and *analyzed,* while the individual operations are still in progress . . . . With our goal set high and Statistical Quality Control guarding each individual operation, you can confidently recommend and use Paranite wires and cables in all residential construction today for lasting satisfaction in 1997!



Building Wire
Types R—RH—RW—T—TW



Service Entrance Cable



Paraflex
Non-Metallic Sheathed Cable

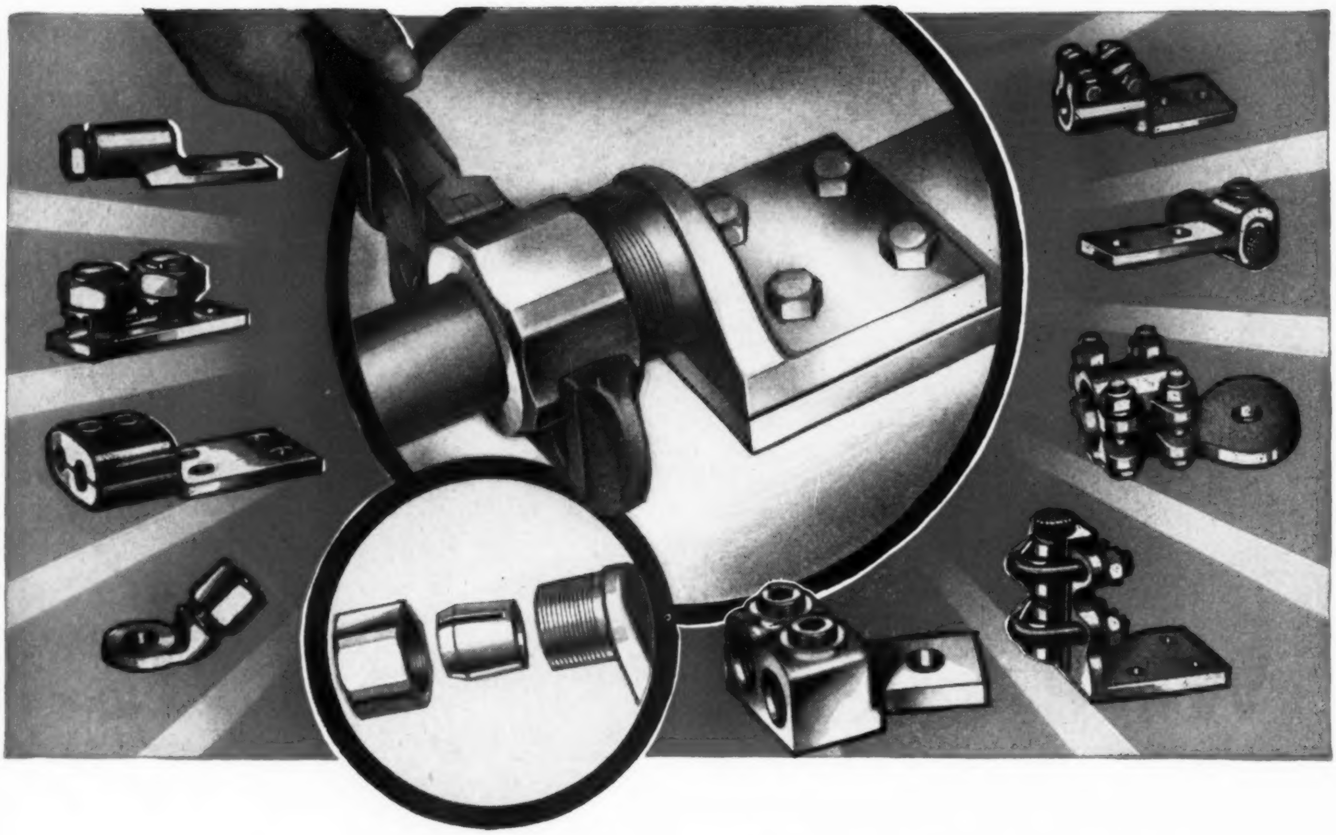
A. B. C.
Flexible Metallic Cable

DISTRIBUTED THROUGH WHOLESALERS

PARANITE WIRE AND CABLE
Division of ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *Atlanta, Ga.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; *Detroit, Mich.; *Kansas City, Mo.; *Los Angeles, Calif.; *Newark, N. J.; Philadelphia, Pa.; *St. Louis, Mo.; *San Francisco, Calif.

ELECTRICAL WIRES AND CABLES *"BETTER THAN CODE REQUIRES"*



You always find the EXACTLY RIGHT TERMINAL—in the Complete line

Shown above, at center, is one of the various Multi-Slit Tapered Sleeve lugs in the Penn-Union catalog. You'll also find E-Z lugs with Post-and-Nut, Vi-tite, Multifit, and numerous clamp types. These pictures can merely suggest the variety.

Below are shown Thread-On, Shrink Fit and screw types, soldering lugs, a wide selection of sheet metal terminals, etc. *Penn-Union makes the terminal you need.*

Also, Tee Connectors; Cable Taps; Straight, Parallel, Elbow and Cross Connectors; Bus Supports, Clamps, Spacers; Grounding Clamps; Service Connectors, etc.

Penn-Union fittings are the choice of leading users, who have found that if *Penn-Union made it, it's dependable*—mechanically and electrically.

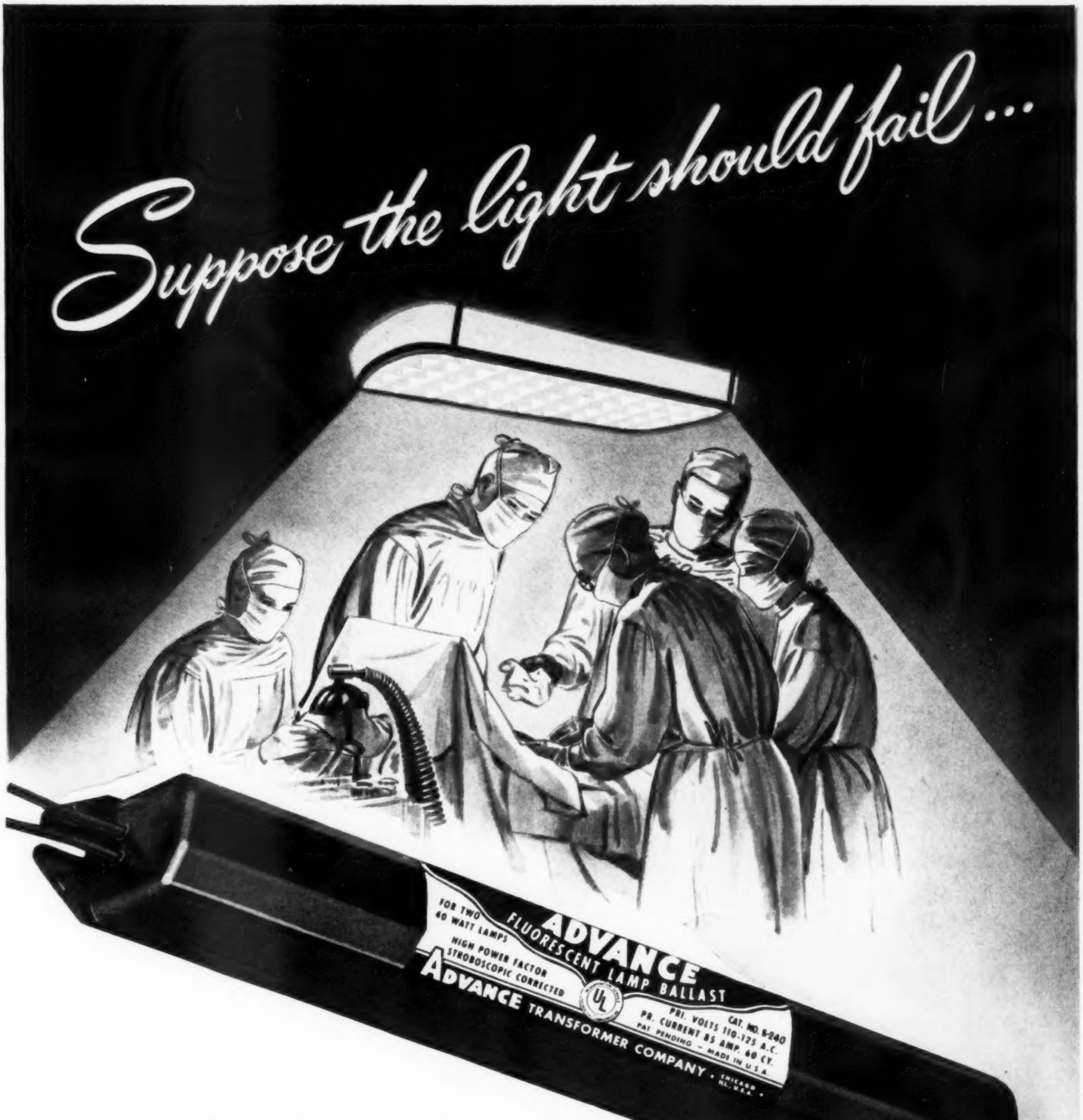
Sold by Leading Wholesalers

PENN-UNION ELECTRIC CORP.
ERIE, PA.

Canada: Dominion Cutout Company, Ltd.
250 Richmond St. West, Toronto

The *Complete* Line of Conductor Fittings

PENN-UNION


Suppose the light should fail...
FOR TWO 40 WATT LAMPS
ADVANCE
FLUORESCENT LAMP BALLAST
HIGH POWER FACTOR STROBOSCOPIC CORRECTED
CAT. NO. 5-240
PRI. VOLTS 110-125 A.C.
PR. CURRENT .85 AMP. 60 CY.
PAT. PENDING — MADE IN U.S.A.
ADVANCE TRANSFORMER COMPANY • CHICAGO ILL., U.S.A. •

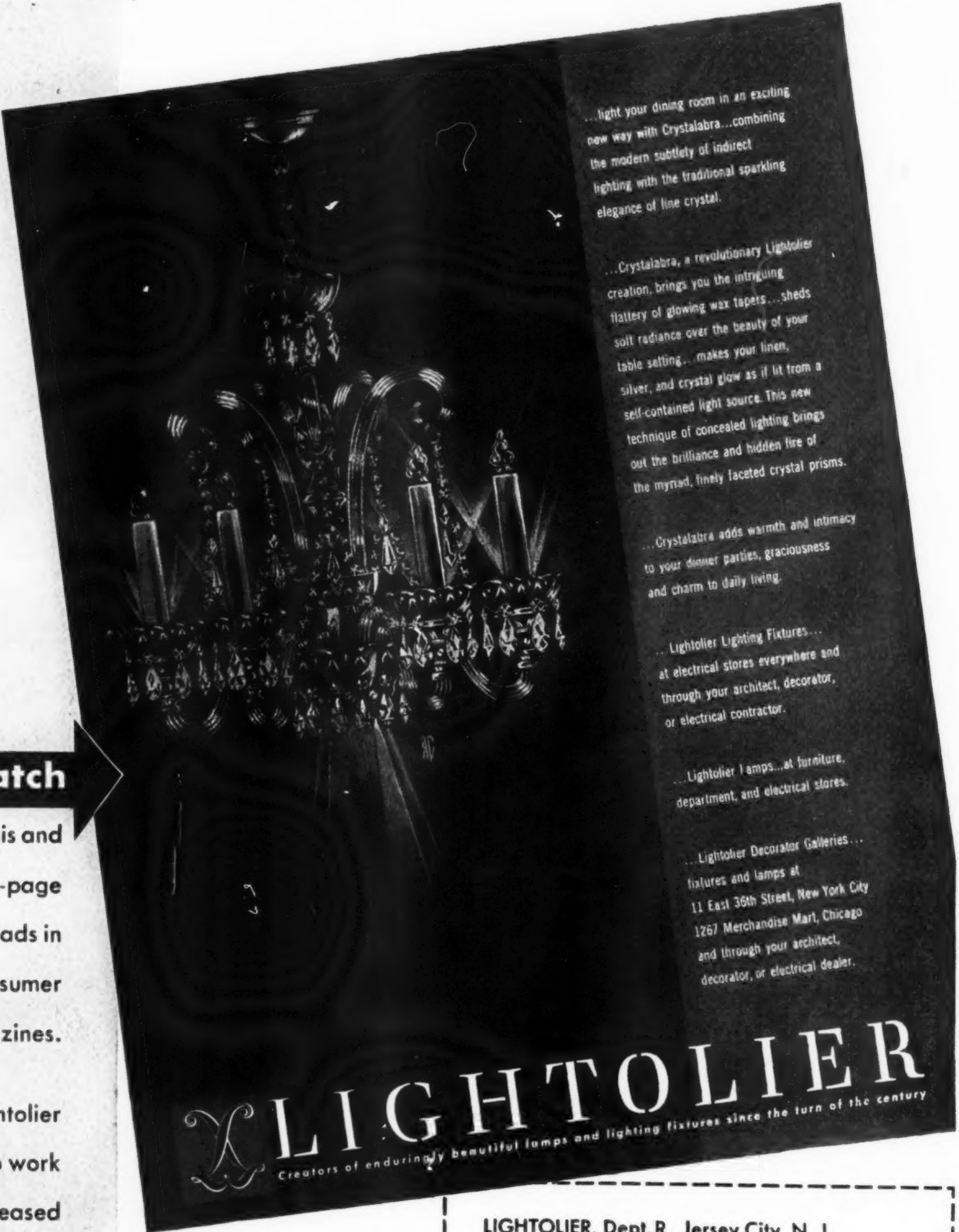
ADVANCE Ballasts give assurance of continuous performance, for only one out of every ten thousand ADVANCE Ballasts made has ever been returned.

WE are able to make quick deliveries on orders placed now.

**ADVANCE
TRANSFORMER
CO.**

1100 W. CATALPA AVE. **CABLE ADDRESS: ADTRANS** **CHICAGO 40, ILL., U. S. A.**

LIGHTOLIER'S record-smashing consumer advertising is the beginning of a new profit plan for you



...light your dining room in an exciting new way with Crystalabra...combining the modern subtlety of indirect lighting with the traditional sparkling elegance of fine crystal.

...Crystalabra, a revolutionary Lightolier creation, brings you the intriguing flattery of glowing wax tapers...sheds soft radiance over the beauty of your table setting...makes your linen, silver, and crystal glow as if lit from a self-contained light source. This new technique of concealed lighting brings out the brilliance and hidden fire of the myriad, finely faceted crystal prisms.

...Crystalabra adds warmth and intimacy to your dinner parties, graciousness and charm to daily living.

...Lightolier Lighting Fixtures... at electrical stores everywhere and through your architect, decorator, or electrical contractor.

...Lightolier Lamps...at furniture, department, and electrical stores.

...Lightolier Decorator Galleries... fixtures and lamps at
11 East 36th Street, New York City
1267 Merchandise Mart, Chicago
and through your architect, decorator, or electrical dealer.

LIGHTOLIER

Creators of enduringly beautiful lamps and lighting fixtures since the turn of the century

watch for this and other full-page Lightolier ads in national consumer magazines.

Put the Lightolier Profit Plan to work for increased sales.

mail this coupon *today*

LIGHTOLIER, Dept. R, Jersey City, N. J.
Tell me how I can put the Lightolier Profit Plan to work for me.
Name..
Address..
City.......................... Zone.......... State..........

OUR TEACHERS–

They Need The Help Of Business Now

THIS is an appeal to raise school teachers salaries—fast. Such appeals are commonly addressed, rather vaguely, to the conscience of the community. This one is not. It is addressed directly to the business community, and to its hard core of common sense.

As a whole, the school teachers of the nation are taking an economic beating. So, too, are their close associates and co-workers, the librarians. In purchasing power, public school teachers salaries, after taxes, average about 20 percent less than they did eight years ago. Beginning salaries of librarians, always low, have fallen behind an equal amount in purchasing power. College and university teachers are not much better off. The pressure is particularly heavy on those in the lower ranks. As a group, teachers and librarians are close to the bottom of the economic heap.

Unless this situation is remedied promptly, it is confidently to be expected that:

1. The more competent teachers will continue to desert our schools in droves, and our libraries will remain inadequately staffed. More than 350,000 teachers – many of them the very able ones–have left the public school teaching staff of about 900,000 in the last six years. More than 100,000 of the replacements are "substandard." They cannot meet the minimum educational requirements of their jobs which, by admission of the profession itself, are none too high.

2. Those who remain will be organized increasingly into economic pressure groups. Teachers strikes and the rapid growth of unionism among teachers at present clearly indicate what is in store.

Many business men are so deeply disturbed by the resort to the strike weapon by some teachers to enforce their salary demands that their sympathy for the general plight of our teachers tends to be dulled. Such an attitude is understandable. It avails nothing, however, in eliminating the crisis in education caused largely by teachers salary troubles.

The crisis in education is a crisis for the nation as a whole. The work of our schools, colleges and libraries is such that its deterioration means deterioration of the nation. However, the salary crisis in education is in special measure a crisis for the business community. That community has a special stake in having a well-educated and well-disposed constituency.

Education and Unionism

There may be room for disagreement as to whether teachers should organize themselves in trade unions, and follow trade union tactics. However, there is no conceivable room for disagreement as to whether organization of teachers into a fighting economic pressure group under the lash of a teachers salary crisis would be a body blow to business. Among many teachers it would foster an abiding hostility to the institution of business which, occupying a key position in the life of the community, had not done its utmost to make such unionization unnecessary by taking a lead in relieving the teachers salary crisis.

In our work of publishing technical periodicals and text books, we at McGraw-Hill meet and come to know many teachers and librarians. We know that, as a group, they have little appetite for participation in militant economic pressure groups. They are far more interested in making a militant assault on ignorance and prejudice through concentration on their professional work. If, through neglect of their economic needs by the business community, they feel forced to resort to trade union organization and tactics, the teachers and librarians can be expected to have an abiding re-

FOR *MODERNIZED* LIGHTING *USE* THE

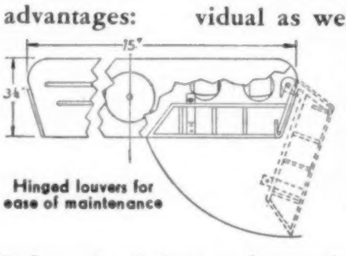
NEW *Firefly* SUPER HI-LITE

This recent installation shows Firefly Super Hi-Lites in "THE BIG SHOE STORE," one of a National chain of shoe stores. The new modern lighting equipment adds to the impressiveness of the show room and shows merchandise at its best.

The new Super Hi-Lite is the last word in fine, qualified engineering as applied to modern lighting. It is thoroughly tested . . . competitively priced. The Kahn staff of engineers and designers is constantly searching for materials and methods to keep Firefly out front in meeting today's demand for maximum efficiency and beauty in lighting . . . as well as in simplicity of installation and maintenance.

The New Super Hi-Lite is an advanced engineered horizontal type, 4-light unit with many advantages:

- A soft, revealing light without glare or shadow.
- Unusual thinness and compact beauty.
- Bottom louvers give the 45° angle cut-off recommended by lighting authorities.



Hinged louvers for ease of maintenance

- Both louvers, and the wafer-like side panels of Alba-Lite Glass, *are hinged for convenience and easy maintenance.* Either pendant or ceiling mounted.
- Ceiling mounted type, because of its unusual thinness (only 3¼" high), provides the advantages of "troffer" lighting but with greater ease and economy of installation.
- Rigid, all-welded deep-formed construction of chassis gives massive strength and rigidity, for individual as well as continuous installations. This construction assures perfect alignment, regardless of ceiling irregularity.
- The basic unit, without louvers and glass can be ordered as the HI-LITE model.

The New Super Hi-Lite is *Underwriters' Approved* . . . union made, finished in quality double-baked, heat-resisting white enamel. Distributed exclusively through leading electrical wholesalers.

Available for immediate delivery.

KAHN MANUFACTURING CO., INC.
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NEMA

THE *Firefly Line* OF FINER FLUORESCENT FIXTURES sentment toward the institution of business. That resentment will, in turn, be communicated in no small measure to the coming generation. Such is the nature of the educational process.

The crisis in education is not, of course, exclusively a matter of salaries. Unsatisfactory working conditions also play a part. Many schools are dilapidated and terribly overcrowded. So are some libraries. Some small-town school boards oppressively insist that the school teachers be the paragons of piety the board members wish they were themselves. Protection of a proper degree of academic freedom is sometimes missing. The teacher is rarely accorded a prestige comparable to the importance of the job. Elements such as these aggravate the crisis in education. But the first and absolutely essential step toward surmounting the crisis is to provide tolerable salaries.

Because of the enormous diversity of local conditions affecting teachers and librarians salaries, no general rule for emergency action would fit all cases. From state to state, average yearly expenditures on education in 1940 varied all the way from about $30 per pupil to about $150. Some states, like Nebraska, finance their schools almost exclusively from local taxes. Others, like Delaware, rely almost entirely on state taxes. Some states and communities have already acted to meet the salary crisis. Others have not. Variations such as these limit any generalization.

Guide for Emergency Action

But as a general proposition it can be safely said that the minimum requirements of the emergency will not have been met so long as the salaries of class room teachers and junior members of college faculties and library staffs have not been increased by the amount necessary to keep them abreast of the increase of about 50 percent in the cost of living since 1939. In many cases, a temporary cost of living adjustment might prove the best way to handle the problem.

This suggestion, let it be repeated, is not offered as a solution of the salary problem, but as a start. With their salaries increased enough to meet the increased cost of living, the teaching and library groups as a whole would still have cause to envy the current economic position of industrial workers. Since 1939, the average of weekly earnings of industrial workers after taxes, has outstripped the rise in the cost of living by about 21 percent.

However, a start and an absolutely essential start would be made toward giving America the sort of educational system it must have not only to fulfill its ideals but holds its own in this highly competitive world. We worry, and I think rightly, about having the free world engulfed by Russian Communism. According to the best figures available, the U.S.S.R. is spending about twice as large a share of its total national income for education as we are. The figures compared include our expenditures for both public and private education. That comparison is really something to worry about.

States Should Take Lead

In dealing with the salary crisis it is up to the teachers to display a maturity and integrity worthy of their profession. Teachers have many employment advantages, such as long vacations. They should not slur them over in making comparisons of their annual incomes. Also employment in teaching and libraries has been notably stable. Teachers and librarians should not ignore that fact in comparing their position with those whose employment has been far less steady.

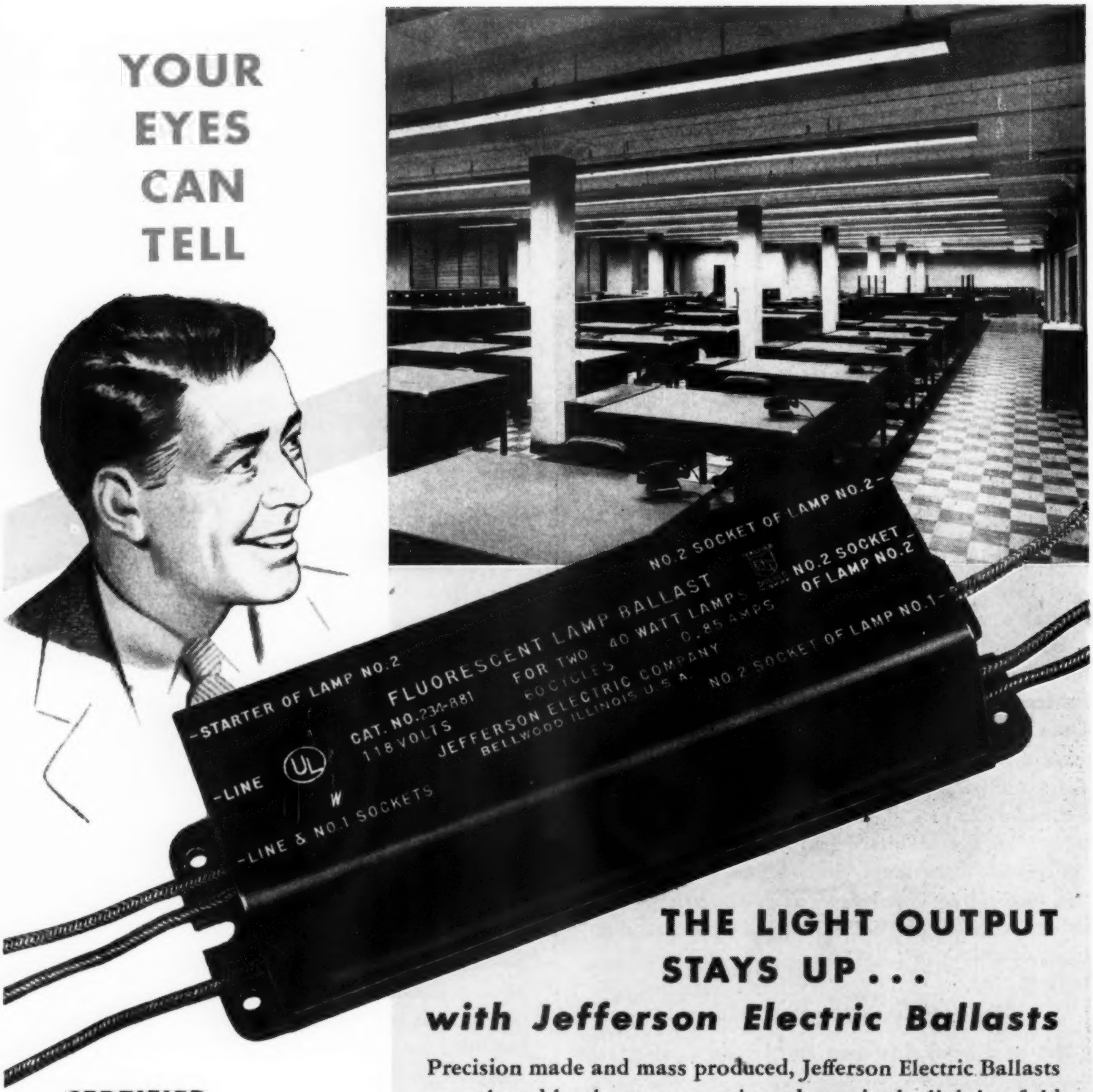
At the same time, the great fiscal difficulties involved in solving the crisis in teachers and librarians salaries must not be used as an excuse for postponing effective action. The states are better equipped financially and otherwise to take such action than is the federal government and, with the localities directly involved, should take the lead. If the price of effective action is a heavier tax burden for communities already too heavily burdened that price must be paid. The crisis presents a major emergency. To handle it as anything less is to court irreparable damage to the nation as a whole, and a special measure of damage to business as well. The intelligent self-interest of business requires that it leave nothing undone to meet and master the crisis in education.

James H. McGraw, Jr.

President McGraw-Hill Publishing Company, Inc.

THIS IS THE 57TH OF A SERIES

YOUR EYES CAN TELL



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FLUORESCENT LAMP BALLAST
NO.2 SOCKET OF LAMP NO.2-
CAT. NO.234-881
FOR TWO 40 WATT LAMPS
NO.2 SOCKET OF LAMP NO.2-
118 VOLTS
60 CYCLES
0.85 AMPS
JEFFERSON ELECTRIC COMPANY
BELLWOOD ILLINOIS U.S.A.
-LINE
W
NO.2 SOCKET OF LAMP NO.1-
-LINE & NO.1 SOCKETS

THE LIGHT OUTPUT STAYS UP . . .

with Jefferson Electric Ballasts

Precision made and mass produced, Jefferson Electric Ballasts are selected by the most experienced men in the lighting field for their unmatched quality, uniformity, and exactness of rating.

Wherever fluorescent lamps are used,—in shops, stores, offices, schoolrooms or homes—the quietness assured by Jefferson Electric Certified Ballasts is an additional comfort,—and their long trouble-free life aids in holding maintenance costs down. JEFFERSON ELECTRIC COMPANY, Bellwood, (Chicago Suburb) Illinois. In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

CERTIFIED

Fluorescent lamp manufacturers guarantee the performance of their lamps only when used with those ballasts which meet the specified performance as tested by Electrical Testing Laboratories or other laboratories of recognized standing.

Jefferson Ballasts for fluorescent lamps are certified by "E.T.L." and are also listed as standard by Underwriters' Laboratories, Inc.

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FOR FLUORESCENT LAMPS

ELECTRICAL WHOLESALING

FORMERLY WHOLESALER'S SALESMAN

Business Index

For the Month of January 1947

SALES That the skyrocketing dollar sales volume reported by electrical wholesalers in December was a temporary freak caused partially by the effects of price decontrol and holiday appliance shipments is well evidenced by the reports for January 1947 which show that these wholesalers throughout the country experienced a sudden return to the still high, but more healthful volume levels of October and November.

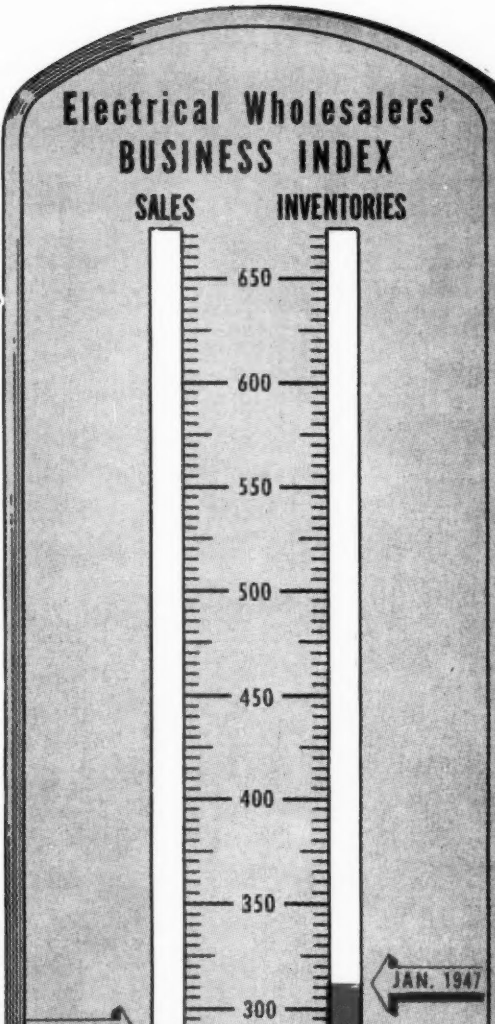
At 286 percent of the 1939 average monthly level, wholesalers' sales volume resumed in January the rather steady month to month gain that has characterized sales performance since the end of the war.

Although the 34 percent drop in wholesalers' dollar sales volume in January 1947 compared to December 1946 may conceivably have marked the end of the despair buying that characterized the first few weeks after the end of price controls, there seems to be another factor present. Considering the general increase in price levels, the January sales volume did not measure up to the monthly gains that had been common during the Fall months.

INVENTORIES Electrical wholesalers throughout the country are finding that they must sink steadily more money into inventory in order to maintain the same physical volume of stocks.

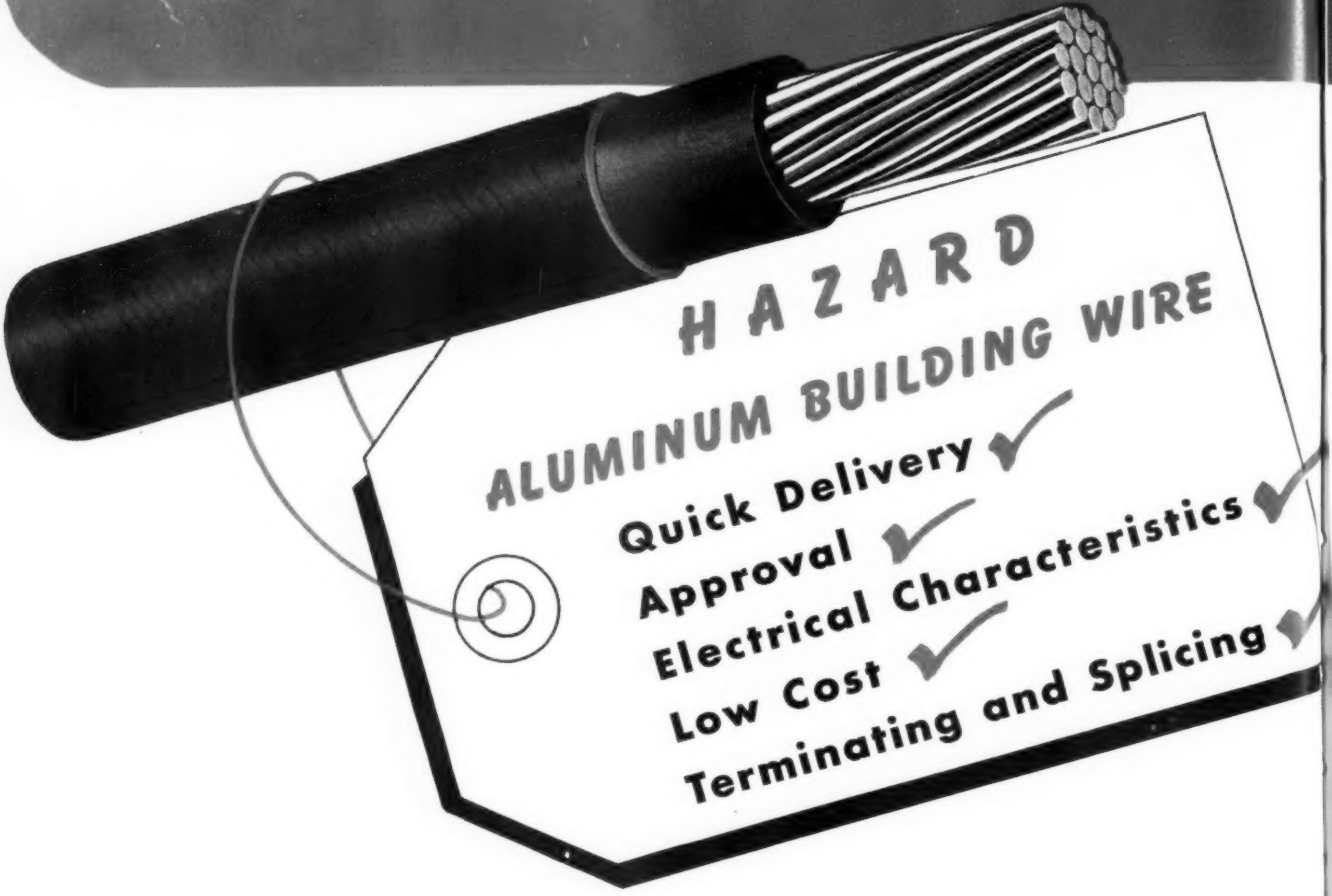
What for a brief period seemed like a field day when goods purchased at the old price levels went out the doors at the new and higher prices, has been fading back into more normal conditions, because replacement stocks from supplies are arriving at proportionately higher net cost—sufficiently higher to have contributed substantially in pushing higher electrical wholesalers' inventory-at-cost in January to 314 percent of the 1939 average monthly level. In the previous month, December 1946, inventories were only 269 percent of the 1939 level.

COLLECTIONS Collection percentage for January 1947 was 83. This was 18 points below the collection percentage for the previous month, and 8 points below the percentage for January 1946. Accounts receivable were down 8 percent from December 1946 and up 70 percent from January 1946.



SOURCE The figures we use as basis for these monthly comparisons of performance in the electrical wholesaling field are collected and compiled by the Bureau of the Census of the U. S. Dept. of Commerce.

FILLS THE BILL IN THE


HAZARD
ALUMINUM BUILDING WIRE
Quick Delivery ✓
Approval ✓
Electrical Characteristics ✓
Low Cost ✓
Terminating and Splicing ✓

✓ QUICK DELIVERY

The world-wide shortage of copper shows evidence of continuing through 1947, maybe longer, thus prolonging the present difficulties on delivery of the larger sized copper conductor building wire.

But there's plenty of aluminum at Hazard and immediate shipments of aluminum conductor building wire are now being made from a substantial factory stock.

✓ APPROVAL

The 1947 National Electrical Code provides that aluminum may be used as a substitute for copper. Underwriters' Laboratories, Inc., have indicated their approval of the use of aluminum conductors, subject to acceptance by local inspection authorities. Underwriters' Laboratories approval stamps are affixed to all Hazard Performite RH building wire containing aluminum conductors.

HAZARD

BUILDING WIRE SHORTAGE

Comparison Copper and Aluminum Conductors

Size AWG	Current Carrying Capacity in Amperes 1947 National Electrical Code Not over 3 Condrs. in Conduit		
	COPPER		ALUMINUM
STRANDED	Type R	Type RH	Type RH
6	55	65	55
2	95	115	95
4/0	195	230	195
500,000 CM	320	380	320
1,000,000 CM	455	545	455

✓ ELECTRICAL CHARACTERISTICS

Current carrying capacity of Aluminum Performite Building Wire Type RH, equals that of copper Hazacode, Type R. The difference in conductivity between copper and aluminum is compensated for by the temperature rating spread between the two types of insulation. Therefore, no increase in conductor or conduit size is required except where runs are so long as to involve excessive voltage drop, or where substituting Type RH aluminum for Type RH copper.

✓ LOW COST

Aluminum Type RH wire costs no more than copper Type R because the higher cost of the better grade Performite Type RH rubber is offset by the lower cost per 1000 ft. of aluminum.

✓ TERMINATING AND SPLICING

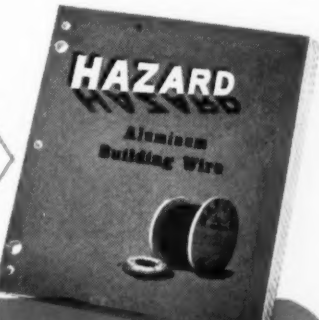
With a little experience, working with aluminum conductors is as fast and simple as with copper. If just ordinary care is exercised in splicing and terminating aluminum conductors, the resulting wiring system will be permanently satisfactory. For example, after 36 years of service, connections of an aluminum cable installation were examined and found to be in perfect condition.

Terminals, connectors and approved methods for their use are recommended by several well-known manufacturers.

* * *

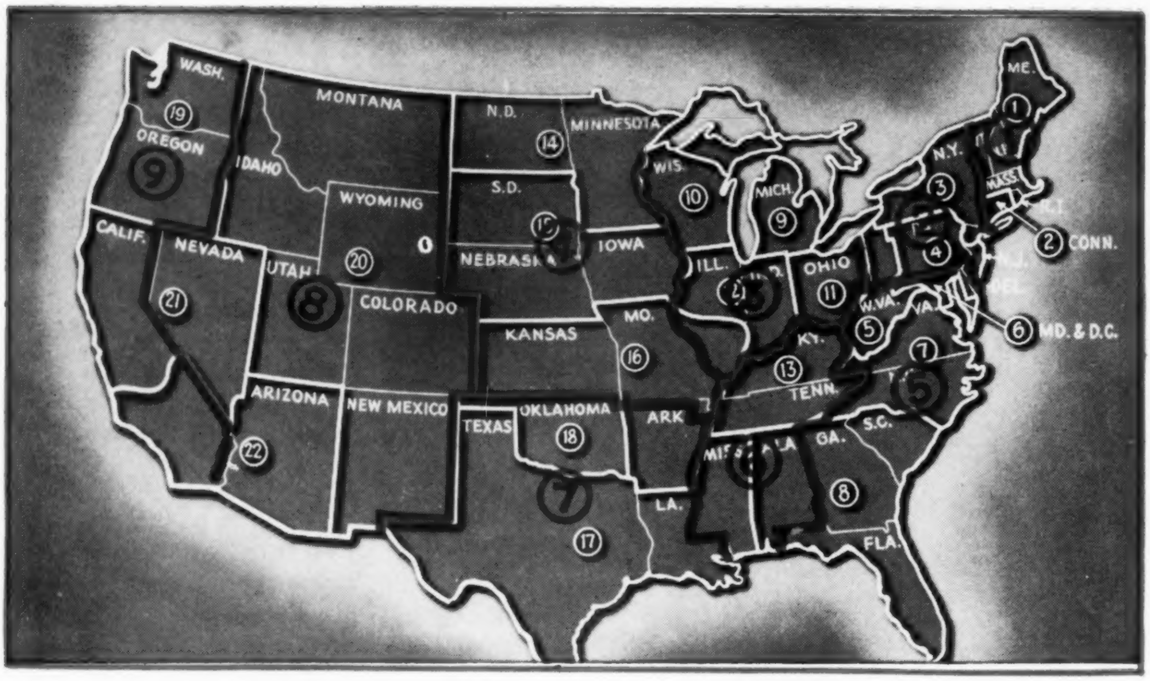
Here, then is quick relief for the building wire shortage of sizes No. 6 Awg. and larger. Hazard Aluminum Building Wire Type RH is being shipped *now* to those areas where local inspection authorities have already approved its use. If you want more information, write for technical bulletin H-407-A1 which gives tables of capacities; comparative weights; data on characteristics; information for quick determination of voltage drop; conductor sizes, circuit lengths and current carrying capacities for both aluminum and copper. Included is a supplement which gives full information on the splicing and terminating of Hazard Aluminum Building Wire. Hazard Insulated Wire Works, Division of The Okonite Company, Wilkes-Barre, Pa.

Write today for this new booklet described above . . . or ask your nearest Hazard representative for details.



insulated wires and cables for every electrical use

9085



Electrical Wholesaling BUSINESS INDEX

REGIONAL ANALYSIS

SALES of electrical goods by wholesalers in January 1947 were rather evenly distributed among the nine geographical regions.

Although all nine groups of states reported severe declines in dollar volume of sales compared to the December level, the very fact that the declines were nearly the same percentage for each individual region indicates that the influencing factors were national in character—most likely the after-effects of extra-heavy buying during December by customers who expected further price increases to hit the electrical field.

Suffering the least drop in sales volume were the New England states, which at 8 points above the national figure, continue that region's erratic course in sales. For several months, sales volume of electrical wholesalers in New England has been reported one month up, the next month down, with no definite trend indicated.

Region 2, the Middle Atlantic states, however, in reporting sales at 6 points below the national figure, draws attention because for the same several months those states of New York, New Jersey and Pennsylvania have been among the leaders in sales gains.

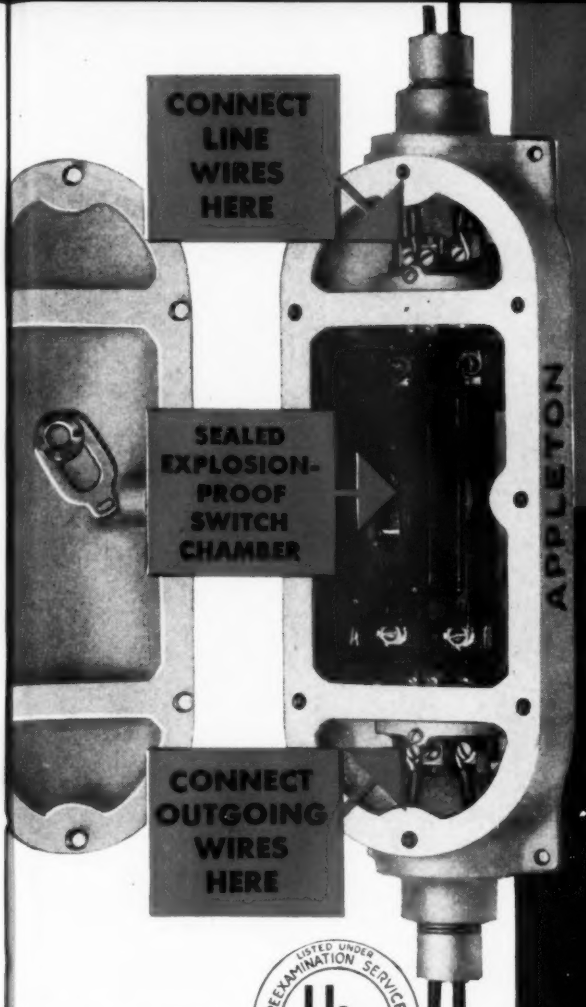
Inventories were not evenly distributed among the nine regions in January. While regions 1 and 6 were reporting stocks at 14 and 9 points below the national figure, regions 2 and 5 inventories were 6 and 7 points respectively above the national level.

JANUARY, 1947

Figures in this table apply to the geographic divisions as outlined and numbered in color on map above

SALES January 1947 Compared in % with		Trading Region (See Map)	INVENTORIES January 1947 Compared in % with	
Dec. 1946	Jan. 1946		Dec. 1946	Jan. 1946
74	184	1	97	202
60	186	2	117	280
66	188	3	112	286
68	189	4	114	262
74	207	5	118	293
67	166	6	102	272
65	175	7	116	281
69	178	8	111	304
65	184	9	106	250
66	**187**	For **U.S.A.**	**111**	**270**

There seems to be little relation between regional sales and regional inventories in January. The New England states, with sales volume above the national level, reported the only regional decline below December. Yet region 5, also with sales above the national level, reported inventories equally well above the level of the country as a whole.


CONNECT LINE WIRES HERE
SEALED EXPLOSION-PROOF SWITCH CHAMBER
CONNECT OUTGOING WIRES HERE
APPLETON

3 IN 1

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APPLETON TYPE "ARTC" SEAL-LINE

TRADE MARK

SWITCH "UNILETS"

REG. U.S. PAT. OFF.

LISTED UNDER REEXAMINATION SERVICE UL UNDERWRITERS LABORATORIES

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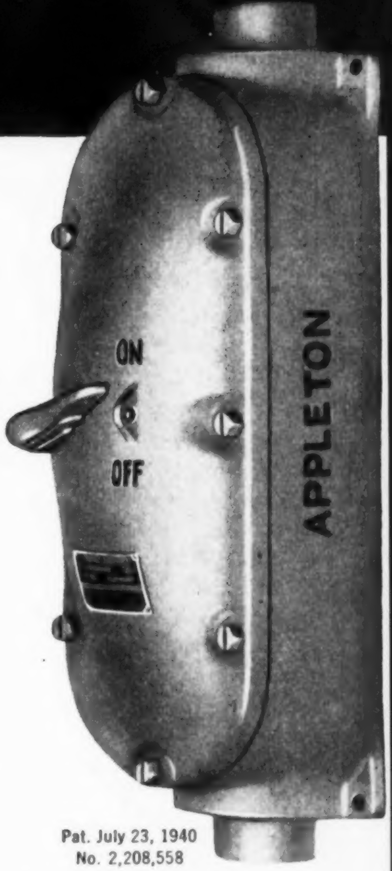
or All Hazardous Locations

because

- **Switch and two sealing fittings in one**
- **No additional sealing required**
- **No extra sealing fittings to install**



Pat. July 23, 1940
No. 2,208,558

Actually 3 fittings in 1 . . . Each Appleton Type "ARTC" Seal-Line Switch "Unilet" takes the place of a switch housing and two sealing fittings; saves time on the job, improves appearance, makes the installation safe and sure.

Middle, explosion-proof switch chamber *sealed at the factory*, tightly and permanently. No additional sealing is necessary, no sealing fittings or accessories. Line wires are drawn into upper and lower junction chambers and connected direct to terminals. The "Unilet" itself is a *combination switch housing and sealing unit.*

Furnished with or without your choice of three well-known makes of circuit breaking switches.

Don't take chances in hazardous locations! Urge your customers to specify Appleton Explosion-Proof Equipment! All sturdily made of MALLEABLE IRON . . . light, smooth, unbreakable . . . all Underwriters' Laboratories Approved.

In the COMPLETE APPLETON LINE there is a fitting exactly designed, precision made, to meet every wiring requirement . . . a fitting fully measuring up to the Appleton reputation: "STANDARD FOR BETTER WIRING!"

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Branch Offices: NEW YORK, 50 Church St. • DETROIT, 7310 Woodward Ave. • CLEVELAND, 1836 Euclid Ave. • SAN FRANCISCO, 655 Minna Street • ST. LOUIS, 420 Frisco Bldg. • LOS ANGELES, 100 North Santa Fe Ave. • ATLANTA, 724 Boulevard, N. E. • BIRMINGHAM, 6 N. Twenty-first Street • MINNEAPOLIS, 305 Fifth St., S. • PITTSBURGH, 414 Bessemer Bldg. • BALTIMORE, 100 E. Pleasant St. • BOSTON, 10 High St. • DENVER, 1509 Seventeenth St. • PHILADELPHIA, 1017 Cherry St.

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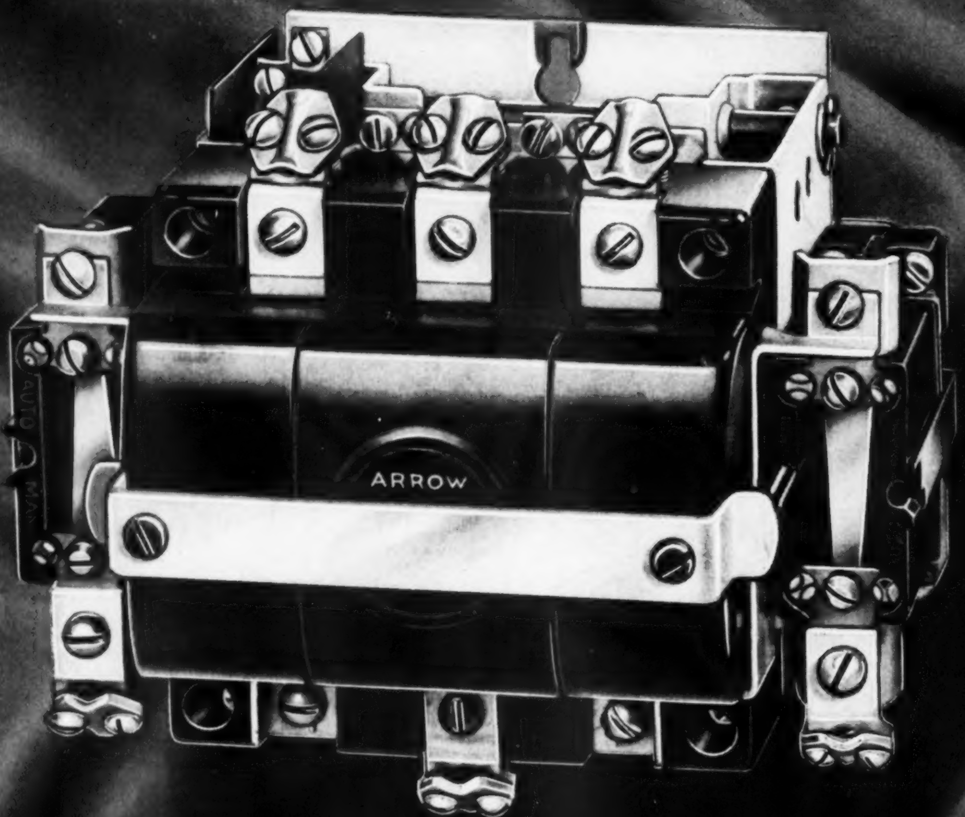
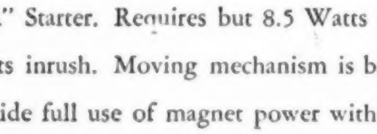


NEW MAGNETIC STARTER

Basic New operating principle of *Balanced Mechanism* is used in this Size 2, Type "RA" Starter. Requires but 8.5 Watts closed, 75 Watts inrush. Moving mechanism is balanced to provide full use of magnet power without lifting extra weight.

Small Size about half that of the conventional Starter for motors up to 25 H. P. Durable, efficient operation ensured by straight-line horizontal action. Designed for straight-through wiring. Write for 4-page illustrated folder.



Contacts WITH CURVED MOVABLE TIPS GIVE BROAD LINE-OF-CONTACT SURFACE

ARROW AH HART

THE ARROW-HART & HEGEMAN ELECTRIC COMPANY, HARTFORD, CONN., U. S. A.

TIMES and TRENDS

1947
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25

Don't Get Scared We doubt that many of our readers can remember important details about that 1920-21 period which often is referred to as the post-World War I "depression." John Wanamaker started it in New York with big-space advertisements in daily papers, proclaiming that prices had gone high enough and that as a protest and corrective measure all prices in Wanamaker stores were being reduced 20 or 25 percent.

Then conditions were unsound and explosive so that the announcement worked like a match in a powder barrel. The day after that advertisement appeared, we happened to start for the Pacific coast, to attend the electrical wholesalers convention at Del Monte.

By the time we reached Chicago, the stores there were advertising drastic price cuts. It was the same as we read Kansas City, Cheyenne and Salt Lake City papers along the route. The first San Francisco newspapers we saw had more of the same which meant that "the bubble has burst" psychology had spread clear across the continent, like wildfire, in a few days, because conditions were explosive.

Last Sunday, Easter Sunday, April 6th, 1947, another department store, Macy's, used full pages in many metropolitan New York papers. The headlines said that many prices are too high. The first two subheads read "Why Prices *Must* Come Down" and "Why Prices *Can* Come Down."

BUT—perusal of metropolitan New York newspapers and of newspapers and reports from Western cities during the following week there was no indication of any wild fire spreading of that trend as it did in 1920. Why? Because, speaking nationally, downward price adjustments on many types of goods already have been made for several months. In other words, price conditions are not explosive, so there is no bubble to burst, and so—how can there be a depression in the offing?

And who is responsible for the fact that price adjustments have been going on for several months and are going on every day? It is none other than that well known John Q. Public, who not only knows what it wants, when and how it wants it, but also has a keen sense of the maximum of what things are worth.

In our editorial EXIT OPA Control—ENTER Self Control (Nov. '46), we said the following:

"Those manufacturers, wholesalers and other businessmen who are inclined to take the demise of OPA as the signal for a process of jacking up prices ultimately to unreasonable levels had better realize that the American consumers of 1946-47 are demonstrably of a different, more realistic type, than those who in 1920-21 allowed prices to skyrocket to stratosphere levels.

"We are quite certain that copper wire will not reach the 40 to 45 cents base—as it did in 1919-20. Nor will we see sugar sell for 29 cents a pound or butter at $1.30.

"What happened to butter prices already has happened to other goods, and **must be expected to happen to any commodity or product, if its price is pushed too far beyond an indefinable but equally inescapable limit that the buyers of 1946-47 will have fixed subconsciously in their mind as representing its maximum worth.** Then, when lack of sales volume forces downward revisions of the price, buying will resume when the zone of acceptable value is reached.

"Why that prediction? We will give what we consider underlying reasons: We believe that the buying public of today is not the boom-minded public that celebrated V-E and V-J days and entered the presumably boom-spawning reconversion period with the enthusiasm born of victory.

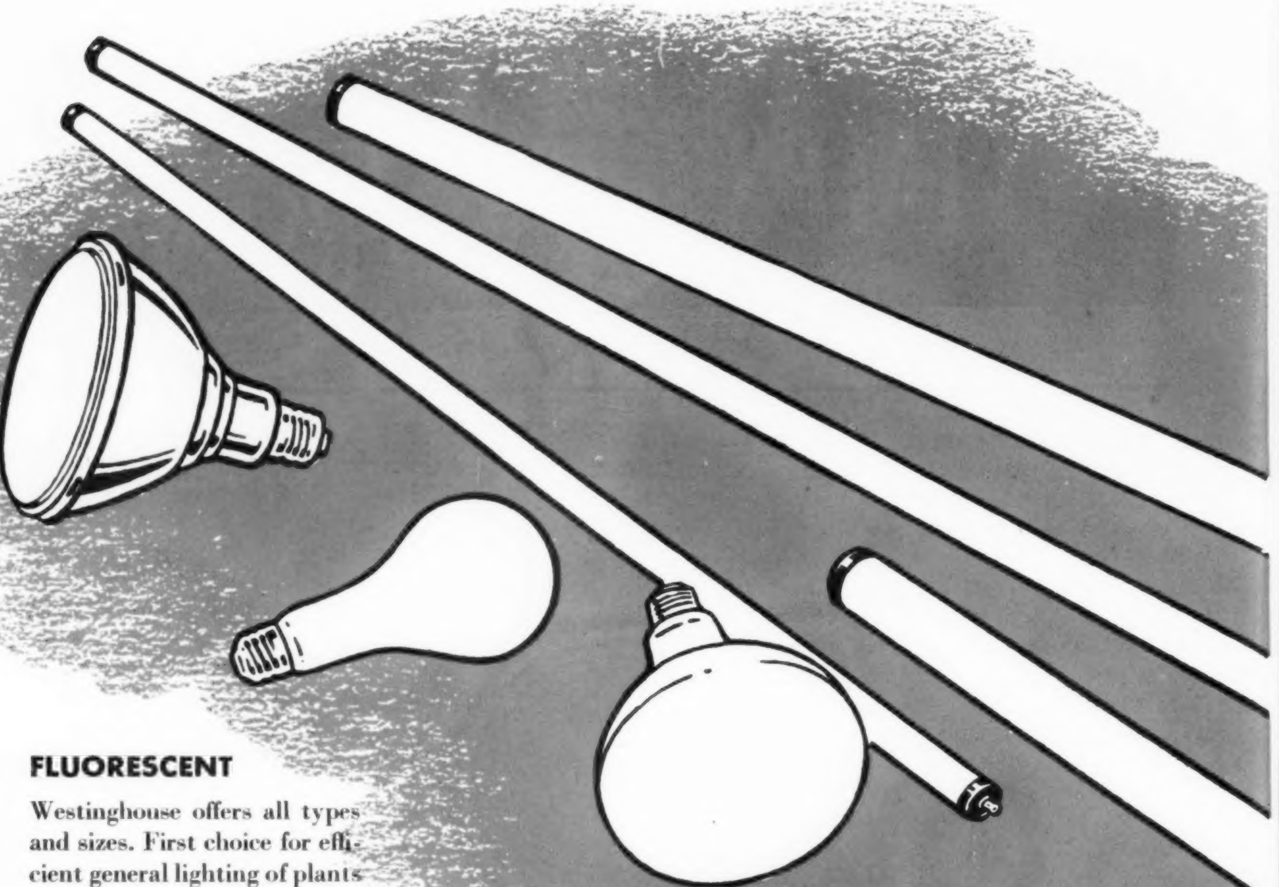
"Happenings of the last 12 months have dampened the enthusiasm of buyers enough to make them wary, and they will increasingly reject goods that are priced at too much more than their present worth. Rejection due to high prices may be expected to occur, whether it be meat or jeep, suits or shoes, brooms or beds, toasters or ties, electric wiring or plumbing supplies, chicken coops or new houses.

"We believe sincerely that manufacturers, wholesalers, and retailers must substitute serious and constantly exercised self-control when it comes to pricing their products. If that is not done, buyer's strikes will become the order of the day and a serious business recession may follow in their wake."

We are glad that in the electrical industry much self-control has been practiced. Prices on many appliance items have been reduced. Some price levels have been retained at the sacrifice of profit. Very few important price increases have been announced in the last few months.

"The *needs* of new homes and homes with adequate electrical wiring, the *needs* for better lighting equipment everywhere, the *needs* of refrigerators, washing machines, vacuum cleaners, the *needs* of other large and small appliances exist today two years after V-E day—because reconversion activities, strikes and re-

(*Continued on page* 71)



FLUORESCENT

Westinghouse offers all types and sizes. First choice for efficient general lighting of plants and offices. The greater efficiency of fluorescent lamps makes possible the higher intensities of light needed for more productive working conditions.

MERCURY VAPOR

These Westinghouse lamps are excellent for general plant lighting when the lamps must be installed in high bays and for critical inspection where color distinction is not a factor. High light output per watt makes these lamps efficient to use.

INCANDESCENT

General service lamps up to 1500 watts serve most industrial applications. Westinghouse Projector and Reflector lamps are a simple, convenient means of supplying a directed or a spread beam of light where it is needed.

INFRARED

Available in types and sizes up to 1000 watts, Westinghouse infrared lamps are proving to be the simple, convenient, and economical source of heat for many baking, drying, and heating processes today.

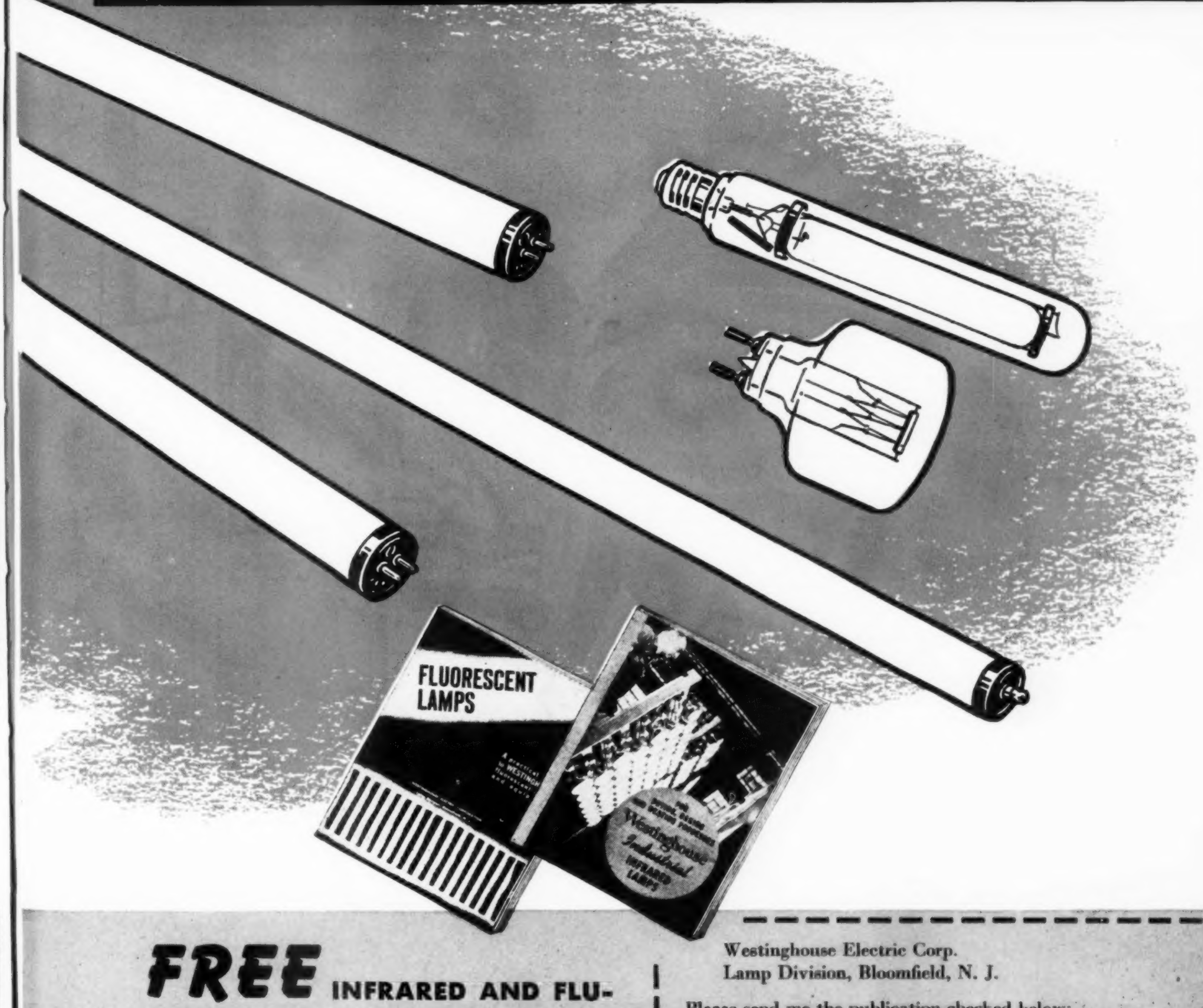
Westinghouse

PLANTS IN 25 CITIES OFFICES EVERYWHERE

LAMPS FOR SEE-ABILITY

Westinghouse Lamps

FOR EVERY INDUSTRIAL REQUIREMENT


FLUORESCENT LAMPS
Westinghouse
Industrial
INFRARED
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FREE **INFRARED AND FLUORESCENT LAMP BOOKLETS**

Send today for either or both of these new information booklets. Check and mail the coupon below. Westinghouse Electric Corporation, Lamp Division, Bloomfield, N. J.

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Lamp Division, Bloomfield, N. J.

Please send me the publication checked below:
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........"Fluorescent Lamps," Form A-4759

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EW-4

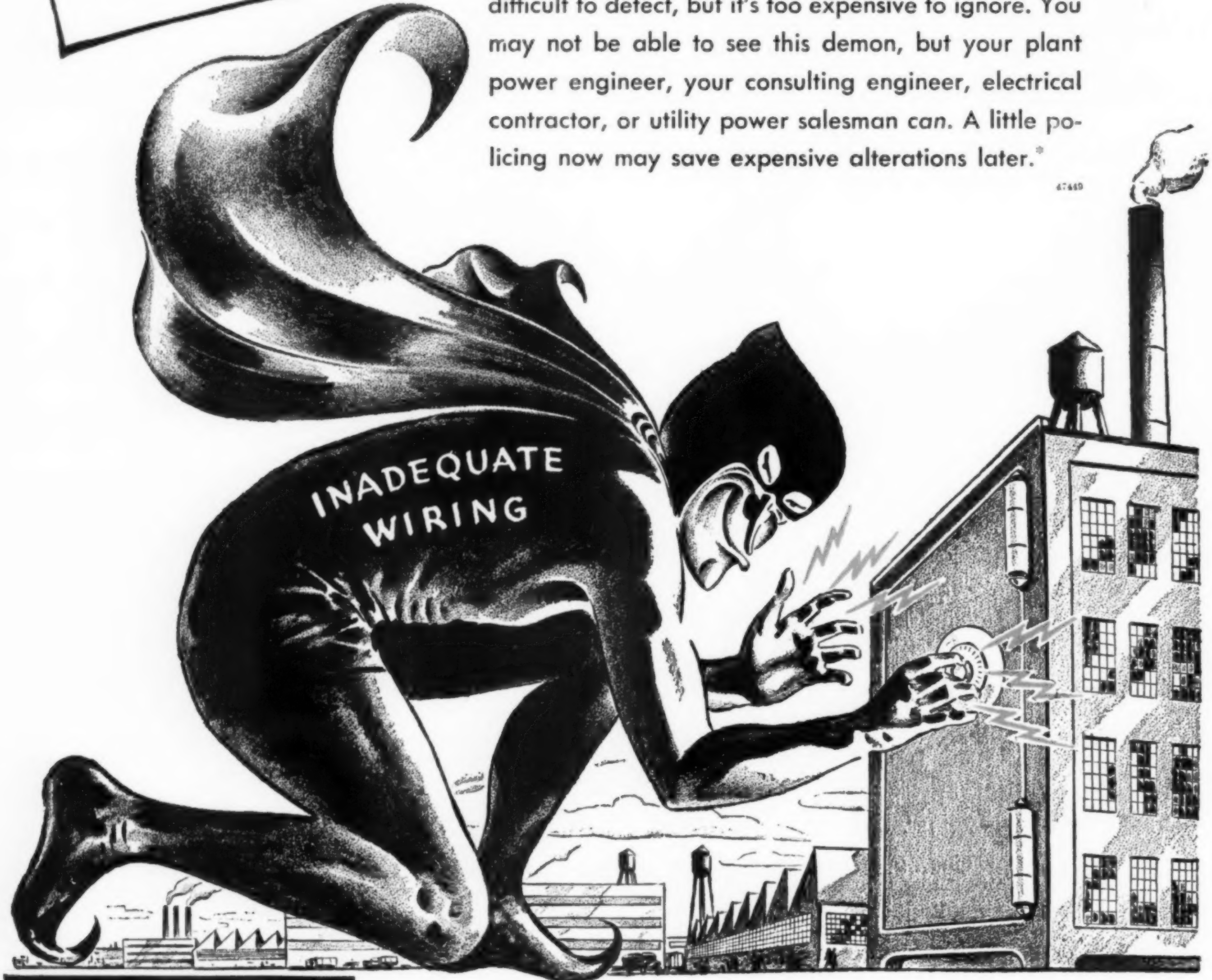
Arrest this Thief!

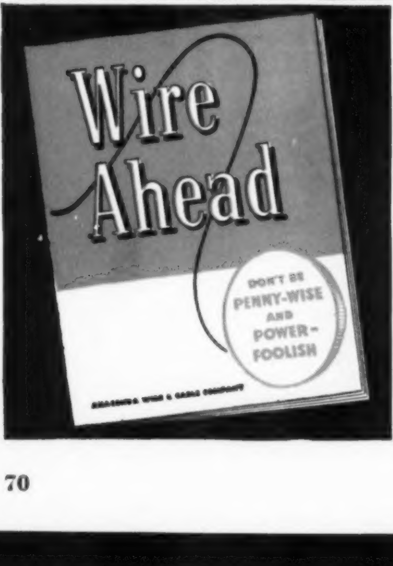
Because adequate wiring is basic ... and affects everyone in our industry ... Anaconda continues to promote this idea in a wide list of national magazines.

INADEQUATE WIRING, the industrial jinx, can rob any plant large or small . . . of as much as 25 to 50 percent of rated efficiency. And what's most discouraging, the greater the production load, the deeper he digs into your resources.

Obsolete, overextended, overtaxed wiring may be difficult to detect, but it's too expensive to ignore. You may not be able to see this demon, but your plant power engineer, your consulting engineer, electrical contractor, or utility power salesman *can*. A little policing now may save expensive alterations later.*

47449




Wire Ahead
DON'T BE PENNY-WISE AND POWER-FOOLISH
ANACONDA WIRE & CABLE COMPANY

*WIRE AHEAD, a new booklet discussing preventive maintenance . . . the symptoms of inadequate wiring . . . and presenting plans for anticipating electrical demand, is now in preparation. We shall be glad to send it on request as soon as it is available. Address Advertising Department, 25 Broadway, New York 4, N. Y.

ANACONDA
from mine to consumer

ANACONDA WIRE AND CABLE COMPANY

(*Continued from page* 67)

sulting shortages have combined to keep the electrical industry from wholly satisfying those needs."

With national income running at the record breaking rate of $177 billions annually, there can be no recession in the buying of electrical goods. Many price adjustments have and will occur and these will be healthy steps toward gaining an orderly transition from the threat of a high pressure-and boom building era to a relatively high plateau of healthy business sales volume which can be maintained for many years.

For the electrical industry the period of greatest peace-time sales volume still lies ahead, unless salesmanship goes on strike.

This is no time for getting scared.

★

Co-op Tax Dodging That was the subject of a radio broadcast by Fulton Lewis, Jr., made February 26th, 1947, over the Mutual network of over 400 stations.

The talk constitutes a mighty interesting case study of a single cooperative and shows clearly how freedom from taxes, can result in phenomenal growth, such as an ordinary tax paying concern would rarely, if ever achieve.

It seems to us that the time has come when wholesalers everywhere should take an active part in fighting for elimination of that type of parasitic competition.

Excerpts from a stenographic transcript of Mr. Lewis' broadcast follows:

"The House of Representatives today passed a resolution recreating the House Committee on Small Business for another session with full investigative powers, which, on the face of it, may not sound very sensational to you. But the actual basic purpose of this investigative committee and its first major undertaking will be complete and exhaustive investigation of the whole field of so-called cooperatives about which I have been reporting to you from night to night for the last week or ten days.

"The cooperatives themselves, and incidentally they have a powerful lobby, got wind of the fact that that was the purpose of this Committee and for several days they have been doing everything possible to fight House approval of this Committee; but their objections were unsuccessful because the resolution setting up the Committee did go through today.

"Now, in the past I promised to give you some case histories of some of these cooperatives, and I have given you some, but let's keep on with them so that you will have plenty of materials in way of evidence.

"Here is the story of a particular farm cooperative—this one an old organization—and what has happened to it in recent years. This one was originally organized in 1923 as the Virginia Feed Service and was reorganized in 1933 under its present name, the Southern States Cooperative, Incorporated. As of last June, it was serving about 200,000 patrons in Virginia, Kentucky, Maryland, West Virginia, and Delaware, of which 200,000 patrons, I must frankly confess, I was, quite innocently, one.

"An investigation of it shows that the Southern States Cooperative group includes 7 different subsidiary corporations, 80 cooperative retail service stores, 3 cooperative freezer-locker plants, 17 petroleum cooperatives and 3 marketing cooperatives. In addition to distributing farm supplies through its own retail outlets, the Southern States Cooperative also sells at the present time through 59 independent local cooperative associations and 484 private dealer agencies.

"Among the various items in which it deals are feed, seed, fertilizer, petroleum and general farm supplies, and it also markets eggs for its members.

"In 1937, the total business of the Southern States Cooperative amounted to $7,250,000; in 1946, last year, it had grown from $7,250,000 to nearly $69,000,000, or an increase of 840 percent, chiefly by virtue of the fact that its annual earnings have been exempt from Federal Income Taxes and as such have been devoted year after year to the expansion of the business in competition with private operators who do have to pay Federal income taxes.

"Southern States Cooperative, according to the record, is wholly and completely exempt from Federal income tax. It does pay some state income taxes in several of the states, in which it operates, but these are comparatively negligible.

"Actually, according to the record, profits for the year 1946 amounted to about $1,400,000 out of which these state income taxes and all other taxes and levies, such as Social Security Taxes and so forth, amounted to about $117,000 which is only about 8 percent of the total profits for the year.

"A private corporation in addition to paying those state and other sundry taxes would have had to pay about $530,000 in Federal income taxes for last year which the Southern States Cooperative did not have to pay under the special privilege which the law allows.

"You may gather from that the competitive advantage which the cooperative enjoys over the private operators struggling to get along and having to pay the full Federal Government tax load.

"Just how much it means in the final result, you may gather from the fact that the net value of the Southern States Cooperative, which was $647,000 in 1937, 9 years ago, was $11,500,000—9 years later—in 1946!

"The assets of the company were $1,400,000 in 1937—nearly $13,000,000 at the present time."

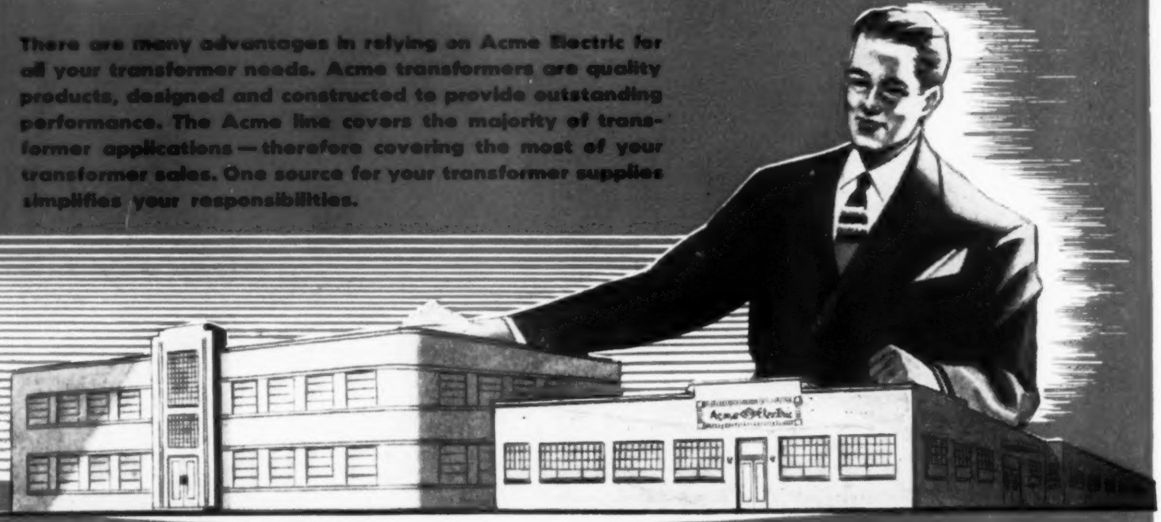
O. Fred. Rost

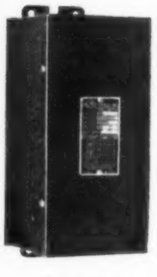
EDITOR

ONE SOURCE

for ALL YOUR TRANSFORMER SUPPLIES

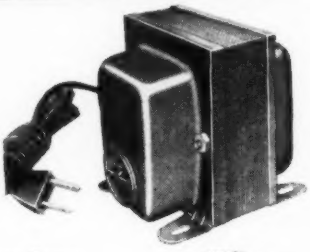
There are many advantages in relying on Acme Electric for all your transformer needs. Acme transformers are quality products, designed and constructed to provide outstanding performance. The Acme line covers the majority of transformer applications — therefore covering the most of your transformer sales. One source for your transformer supplies simplifies your responsibilities.





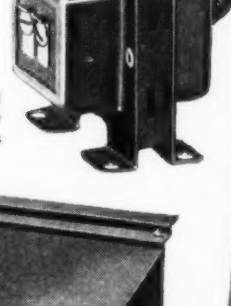
Signaling Transformers

Fluorescent Lamp Ballasts



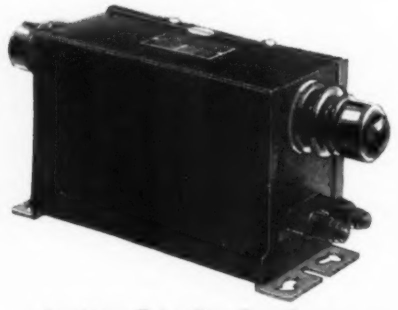
Step-Down Transformers

Cold Cathode Lamp Ballasts

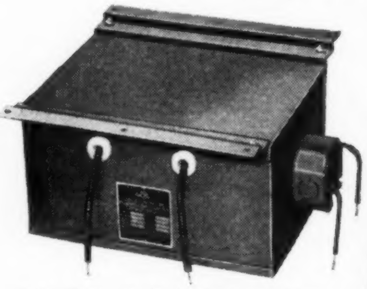


Bell Ringing and Chime Transformers

Air Cooled Power Transformers



Luminous Tube Sign Transformers



Cold Cathode Lighting Transformers

ACME ELECTRIC CORPORATION

36 WATER ST. CUBA, N. Y.

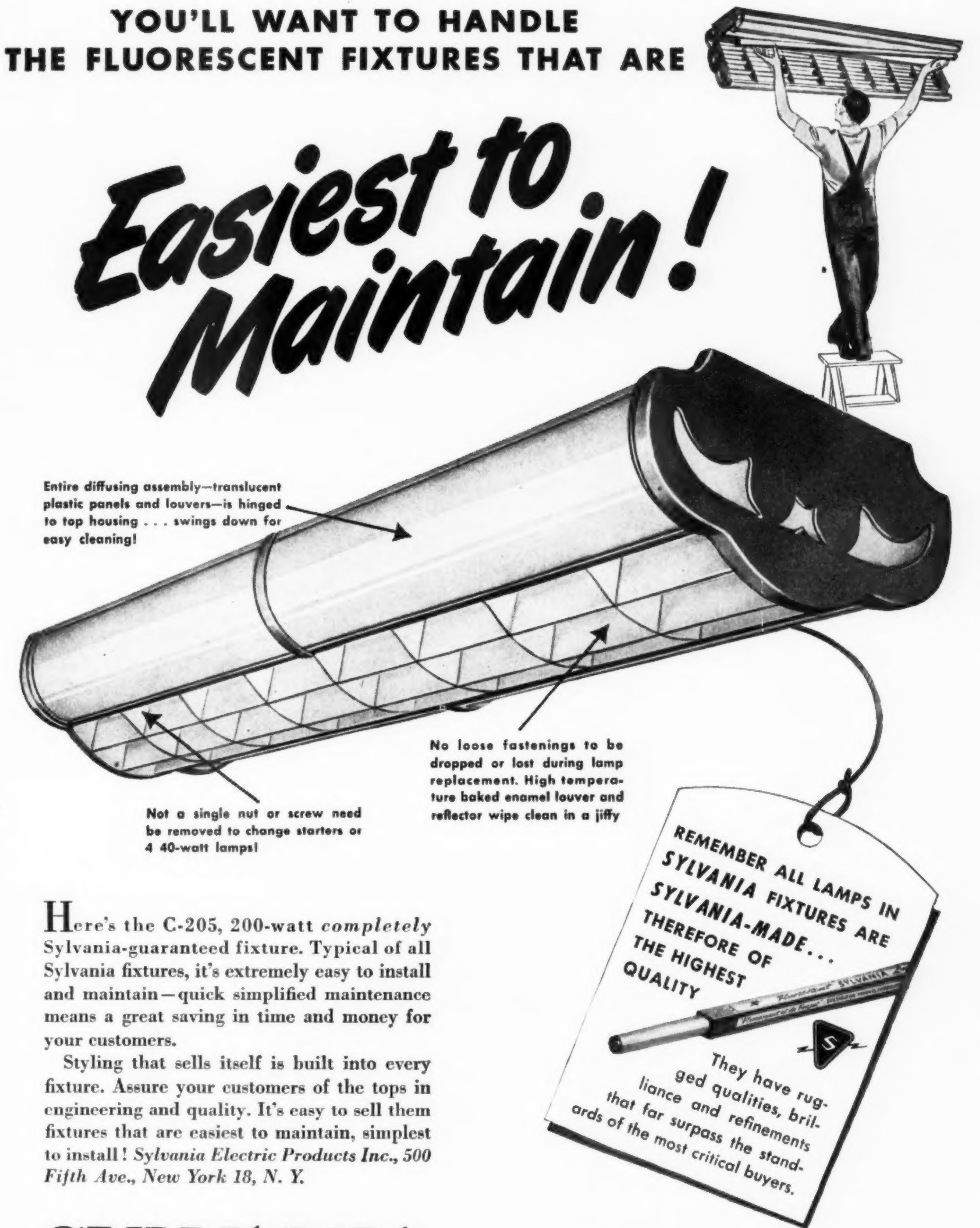
Acme ACME Electric

TRANSFORMERS

Acme Electric manufactures Luminous Tube Transformers—Fluorescent Lamp Ballasts—Cold Cathode Lighting Transformers and Ballasts—Mercury Vapor Lighting Transformers—Radio and Television Transformers—Electronic Transformers — Door Bell, Chime and Signaling Transformers —Safety Transformers—Voltage Regulating Transformers—Step Down Transformers — Control Transformers — Warp-stop Transformers—Capacitor Transformers for Power Factor Correction—Air Cooled Power Transformers—Rectifiers.

ACME ELECTRIC (CANADA) LTD.

824 Notre Dame St., West Montreal, Canada



YOU'LL WANT TO HANDLE THE FLUORESCENT FIXTURES THAT ARE

Easiest to Maintain!

Entire diffusing assembly—translucent plastic panels and louvers—is hinged to top housing . . . swings down for easy cleaning!

No loose fastenings to be dropped or lost during lamp replacement. High temperature baked enamel louver and reflector wipe clean in a jiffy

Not a single nut or screw need be removed to change starters or 4 40-watt lamps!

REMEMBER ALL LAMPS IN SYLVANIA FIXTURES ARE SYLVANIA-MADE... THEREFORE OF THE HIGHEST QUALITY

They have rugged qualities, brilliance and refinements that far surpass the standards of the most critical buyers.

Here's the C-205, 200-watt *completely* Sylvania-guaranteed fixture. Typical of all Sylvania fixtures, it's extremely easy to install and maintain—quick simplified maintenance means a great saving in time and money for your customers.

Styling that sells itself is built into every fixture. Assure your customers of the tops in engineering and quality. It's easy to sell them fixtures that are easiest to maintain, simplest to install! *Sylvania Electric Products Inc., 500 Fifth Ave., New York 18, N. Y.*

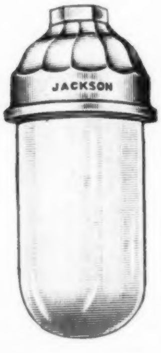
SYLVANIA ELECTRIC

"Fluorescent at its Finest!"

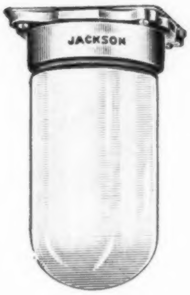
FOR OFFICE, STORE, HOME, FACTORY

JACKSON
Quality
PRODUCTS

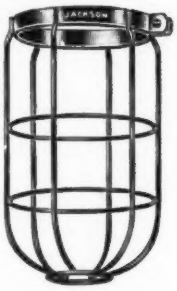
VAPORPROOF UNITS



2800 - 2804



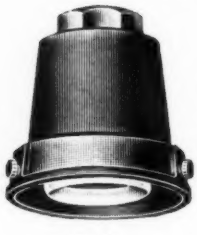
2802



2801

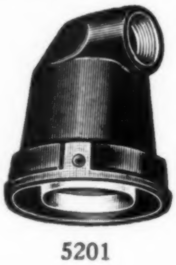
- Now made in aluminum.
  No. 2800 has a cast aluminum hood tapped for 1/2" pipe . . . 60-100 watt lamp used.
- No. 2804 is for 150-200 watt lamp.
- No. 2802 is an outlet box type and can be mounted on either a 3 1/4" or 4" box . . . 60-100 watt lamp used.
- No. 2801 wire guard made especially to fit No. 2800-2802.

WEATHERPROOF SOCKETS



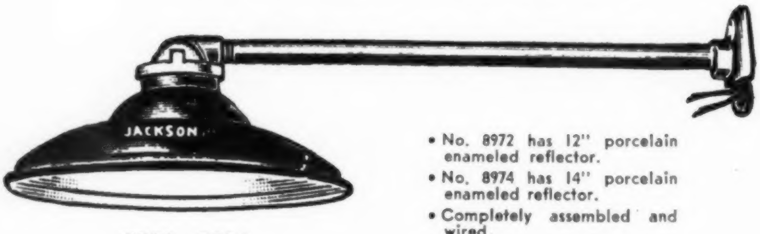
5200

- Now made in aluminum.
- Tapped for 1/2" conduit. Will fit any fixture with 2 1/4" holder.



5201

YARDLIGHTS



8972 - 8974

- No. 8972 has 12" porcelain enameled reflector.
- No. 8974 has 14" porcelain enameled reflector.
- Completely assembled and wired.
- For REA installations.

★ **JACKSON Lighting Equipment sold exclusively thru Electrical Wholesalers.**

☆ **Manufacturers of Industrial Lighting Equipment.**

JACKSON ELECTRICAL COMPANY

900-910 W. VAN BUREN STREET
CHICAGO 7, ILLINOIS

ELECTRICAL WHOLESALING News

"Help Buyers Sell" Theme Stirs Coast Wholesalers

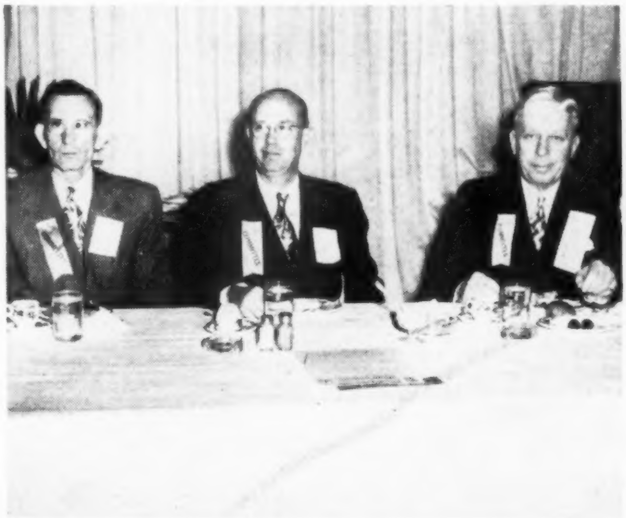
Manufacturers' coming production could swamp unprepared dealers, might force new methods of merchandising, so wholesalers and dealers are told at Los Angeles sales conference

LOS ANGELES—Electrical wholesalers and their appliance retailers must get ready with some aggressive selling to handle the masses of electrical goods that are flowing in steadily growing volume from the manufacturers' geared-up production lines, or some other method of selling will step in above or below the distributor-dealer level to handle that job. That is what Paul W. Ivey, professor of merchandising at the University of Southern California, said in the major address at the Mid-winter sales Conference of the Southern California Radio and Electrical Appliance Association at Los Angeles on March 6.

Manufacturers' production facilities, brought to peak efficiency and greatly increased in capacity by World War II, will soon be turning out the greatest volume of merchandise the country has ever known, he said, and only good hard, aggressive selling can create the market that these manufacturers will demand.

If dealers and wholesalers think that they can sit back because they control the only lifelines they are mistaken, Mr. Ivey stated. He pointed to the period following World War I, when, faced with the increase in production that followed that war, dealers were not equal to the sales responsibility.

"The result was the development of the chain store," he said. "The chain store system of merchandising, bringing in new and improved methods of inventory control and efficient over-the-counter selling had its greatest era of growth during that period when the independent retailer, supplied by the independent wholesaler, had



OFFICIALS of the Southern California Radio & Electrical Appliance Association seated at the speakers table at the Mid-Winter Sales Conference recently held in Los Angeles. Left: D. C. Culbreath, who was elected president of the association; center, Robert H. Cockfield, retiring president; right, William J. Quinn, managing director.

SPEAKERS and "MC" at the Mid-Winter Sales Conference of the S. California Radio & Elec. Appliance Assoc. Left: George C. Tenny, vice president, McGraw-Hill Publishing Co.; center, Marshall Wells, Suess, Young and Brown Co., chm. of the conference and master of ceremonies; right, Dr. Paul W. Ivey, professor of merchandising, USC.

Holcomb & Hoke Co., of Indianapolis, manufacturers of home stokers and air-moving equipment, select MITCHELL Lighting for their impressive new offices. MITCHELL Model No. 3011 De Luxe Louvered Luminaires, ceiling mounted, provide "efficiency-engineered" illumination throughout. Distributor: Peerless Electric Supply Co., Indianapolis.

Model No. 3011
DeLuxe Louvered Luminaire

Efficient, modern office of the Audograph Company, Atlanta, Georgia. Completely and effectively lighted throughout by MITCHELL Model No. 3011 De Luxe Louvered Luminaires, suspension mounted. Distributor: Electrical Wholesalers, Inc., Atlanta. Contractor: Eckhardt-Ness Electric Co., Atlanta.

MITCHELL

Lights the Modern Office

"Our MITCHELL Lighting has really boosted employee comfort . . . nothing but praise from everyone. . . . We can shift our people around anywhere without rearranging our lighting. . . ." That's the comment of Holcomb & Hoke's personnel manager who reports complete employee and management satisfaction with MITCHELL Lighting.

When MITCHELL lights the modern office, employees *feel* the difference in reduced eye fatigue. Management *sees* the difference in improved office efficiency. And clients react *favorably* to this impressive functional lighting. That's why MITCHELL lights so many modern offices!

Installations like these bring better business to the wholesaler. MITCHELL sales are clean package transactions—trouble-free volume business. MITCHELL installations are easy, smooth jobs for the contractor—time-saving, profitable business.

For new offices—for remodeling—the MITCHELL Line offers a complete selection of Commercial Luminaires. Every model combines impressive appearance with the high-level, overall "seeing" light so necessary to efficient operation throughout the modern office . . .

Mitchell Manufacturing Company
2525 CLYBOURN AVENUE, CHICAGO 14, ILLINOIS
In Canada: Mitchell Manufacturing Company, Ltd., Toronto, Canada
Far West: *Complete Modern Plant and Sales Office at Los Angeles Serves the Entire Pacific Coast Area*
1019 NORTH MADISON AVENUE, LOS ANGELES 27, CALIFORNIA

MITCHELL

Better Light for Better Business

Makers of Commercial and Industrial Fluorescent Lighting Equipment Store Window Lighting • Spotlights and Floodlights • Desk Lamps • Portable Floor and Table Lamps • Bed Lamps • Ultraviolet and Infrared Health Lamps • Residential Lighting Specialties . . . Rad-i-Air Germicidal Units (made by Tru-Air Ultraviolet Products Co., Los Angeles) failed to improve merchandising methods to equal the selling job demanded by the manufacturers' rate of production.

"Help the Buyer Sell"

A great deal of the responsibility for improving the retailers' selling methods is on the shoulders of the wholesalers, said Mr. Ivey, whose talk was entitled "Helping the Buyer Sell" and was designed to outline the types of assistance that wholesalers and manufacturers should give to their dealers during this period.

Mr. Ivey's address was rich in pointed bits of advice such as the following.

Dealers need help in training their young men in the fundamentals of good selling. They will improve as they get practice, but unless they first have knowledge of the basic principles of selling, they will be "practicing their mistakes." Dealers should be urged to hire only the highest type of salesmen.

Distributors should see that their dealers have a good method of stock control. The lack of proper turnover, with much of it due to poor records, is the main reason for the "insufficient capital" that is listed as the reason for most business failures. A dealer must have a regular turnover figure for every department before he can operate that business efficiently. He must know, if goods are not moving, whether he is buying too much or selling too little. He must keep a clean stock. Follow the example of chain store and department store retailers, where goods which do not move are cleared out. The dealer must get his money into goods which will turn over quickly at a profit. Dealers' calling their stock "assets" because all goods are liabilities until they are sold.

Mr. Ivey said that the time is here when distribtuors must help their dealers with advertising, both in the preparation of copy that sells, and in the arrangement of cooperative plans.

The Outlook

As the other guest speaker at the Mid-Winter Sales Conference, George C. Tenney, vice-president of the McGraw-Hill Publishing Co., predicted in an "Appliance and Radio Outlook for 1947" that the limit on the supply of enameled steel would prevent appliance manufacturers from hitting the peak of their production this year. However, there would be a slowly increasing rate of production that may erase the backlogs of a few appliances, particularly washers and home freezers.

Aided by "spirits" (the recorded words of seven nationally-known appliance manufacturers) Mr. Tenney gave a short picture of the coming year and what could be expected in the manufacture of refrigerators, washers, ranges, home freezers, vacuums, radios and small appliances.

Association Rolls Increase

Membership in the Southern California Radio and Electrical Appliance Association has more than doubled during the past year, according to Robert H. Cockfield, past president, in an annual report released at the time of the Mid-Winter Sales Conference. Now belonging to the association are 222 retailers, service shops and wiring contractors, 4 banks, 39 wholesale distributors, 12 manufacturers, a department store and a chain store, Mr. Cockfield reported.

The sales conference program was under the direction of Marshall Wells, manager of the major appliance division, Suess, Young and Brown, Inc., Los Angeles wholesalers, who acted also as a master of ceremonies. Introductory and closing remarks were given by William J. Quinn, managing director.

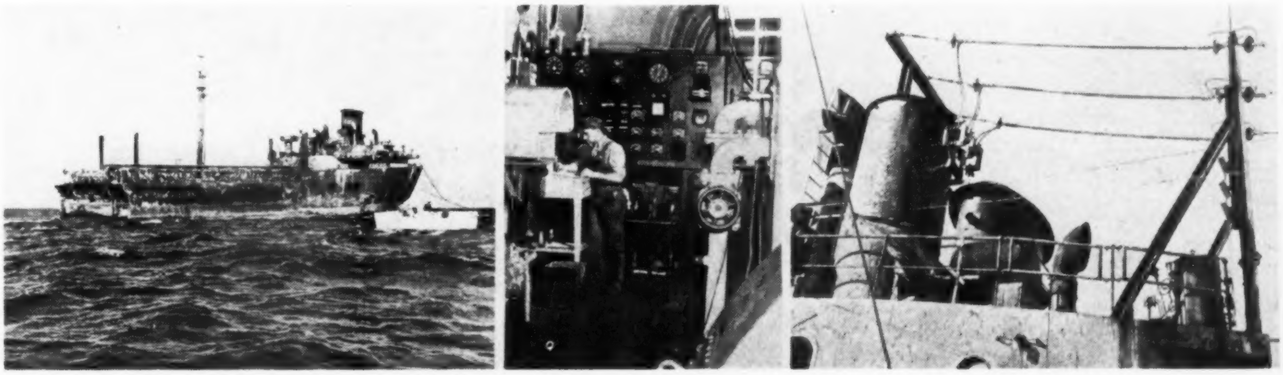
Rectifiers Cannot Be Counted as Tubes: FTC

WASHINGTON—It is improper to count rectifiers as tubes in advertising and selling radio sets as containing a certain number of tubes, the Federal Trade Commission said in a recent statement.

Under Rule 3(k) of the Trade Practice Rules for the Radio Receiving Set Manufacturing Industry, and in the light of the decision of the court in the case of Zenith Radio Corporation vs. Federal Trade Commission, the Commission stated that:

"The Commission does not regard it as improper, where the advertisement prominently and conspicuously states the actual tube capacity of a radio set (computed without inclusion of rectifiers or other devices which do not perform the recognized and customary function of radio receiving set tubes in the detection, amplication and reception of radio signals) for such advertisement also to contain a further statement to the effect that the set in addition contains a rectifier provided such is true and the advertisement as a whole or in part, involves no misrepresentations or deception.

"It is an unfair trade practice for any member of the industry to use or cause to be used, any of the following described types of advertisements or representations: Advertisements or representations that state or imply that any radio receiving set contains a certain number of tubes or is of a certain tube capacity when one or more of the tubes in the set are dummy or fake tubes or tubes that perform no useful function, or are tubes that do not perform the customary function of a radio receiving tube in the detection, amplification and reception of radio signals."



STERN HALF of the former Russian turbine-electric tanker, the SS Donbass III, is the Pacific Gas & Electric Company's novel solution to the postwar shortage of central station equipment for additional electric power in the Humboldt area of California. Left photo: Stern half of SS Donbass being towed to Eureka, Calif. Center photo: Main control panel in engine room of tanker. Right photo: Transmission lines rigged to carry power from 6700 hp. General Electric marine power plant.

"Exhibit A"

FOR BETTER FLUORESCENT LAMP PERFORMANCE

CERTIFIED
ETL
SPEC. NO.6

All the evidence favors CERTIFIED STARTERS

There's enough proof of the high quality of CERTIFIED STARTERS to convince any lighting "jury"! Take this one fact, for example: 10 leading starter manufacturers make their products to conform to rigid specifications set up by foremost lighting experts. Electrical Testing Laboratories, Inc., test, check and CERTIFY those products as meeting the specifications . . . identify them by the famous ETL mark on every starter. That's the *right kind* of protection for any user or seller of fluorescent lighting! It pays *always* to specify fluorescent lamp starters bearing the familiar and famous "Certified ETL".

CERTIFIED
E·T·L
SPEC. NO. 6
HIGH PF

• Be sure they're CERTIFIED... look for this mark stamped on the case.

Address inquiries to any of the following manufacturers of

Certified Starters

The Arrow-Hart and Hegeman Co., Hartford, Connecticut
The Bryant Electric Co., Bridgeport, Connecticut
Dura Electric Lamp Co., Newark, N. J.
General Electric Co., Bridgeport, Connecticut
Harvey Hubbell, Inc., Bridgeport, Connecticut
Instant Glow Starter Corporation, New York, N. Y.
Kuthe Laboratories, Inc., Newark, N. J.
The Lloyd Products Co., Providence, R. I.
Pass & Seymour Co., Syracuse, N. Y.
Sheldon Electric Co., Irvington, N. J.

Now Box and Fitting Mfrs. Really Will Get Steel

Electrical Outlet, Switch Box and Fittings Industry Advisory Committee told that steel industry will supply 30,000 tons each quarter of 1947. Enough for near capacity production

WASHINGTON—The steel industry has agreed to supply manufacturers of wiring devices used in the Housing Program approximately the same amount of steel in each of the last three quarters of this year as this industry was allocated by the CPA for the manufacture of these items during the first quarter of 1947. The announcement, which was made here recently, followed a meeting of the Electrical Outlet, Switch Box and Fittings Industry Advisory Committee and the Civilian Production Administration.

The CPA said that this voluntary cooperation by the steel industry should enable the wiring device industry to continue its present production, reported to be near capacity, for the remainder of 1947. The allocation amounts to approximately 30,000 tons of steel each quarter.

CPA estimates that the minimum essential requirements for outlet, switch and receptacle boxes and "BX" and "Romex" type box connectors for 1947 are: 161 million outlet, switch and receptacle boxes; 207 million "BX" and "Romex" type box connectors.

The government agency pointed out that these figures do not include estimated deficits in 1946 of 24 million boxes and 49 million connectors. The minimum requirements for 1947 are chiefly for housing, including maintenance in existing housing, rural electrification and nondeferrable commercial and industrial construction, CPA said.

The committee was of the opinion that these minimum requirements can be achieved if there is an adequate flow of materials, especially steel, and iron castings and screws.

CPA said that it was the government's present intention to continue the priorities assistance presently available to manufacturers of electrical wiring devices under Priorities Regulation 28. This assistance, in the form of priorities for many production, operating and equipment items, will not, however, include merchant pig iron, steel and phenolic molding compounds, which are now covered by voluntary allocation agreements.

Members of the Electrical Outlet, Switch Box and Fittings Industry Advisory Committee are: Claude E. Bowers, Bowers Mfg. Co., Los Angeles; R. D. Cook, Steel City Electric Co., Pittsburgh; H. E. Kaden, Newart Mfg. Co., Cleveland; N. J. MacDonald, Thomas & Betts Co., Elizabeth, N. J.; F. R. McQuown, All-Steel Equipment Co., Aurora, Ill.; G. H. Keith Miller, Rattan Mfg. Co., New Haven, Conn.; D. J. Murray, General Electric Co., Bridgeport, Conn.; William Parker, Union Insulating Co., Parkersburg, W. Va.; F. E. Pope, Porcelain Products Co., Findlay, Ohio; W. C. Robinson, Jr., National Electric Products Corp., Pittsburgh and Murray Whitfield, Appleton Electric Co., Chicago.

Albert A. Fox, chief of the Electrical Products Branch, CPA Building Materials Division, who was government presiding officer at the meeting, commended the industry for their cooperation and production. He urged the industry to continue all-out efforts in production of critical electrical wiring materials in order that housing and other essential construction may not be delayed.

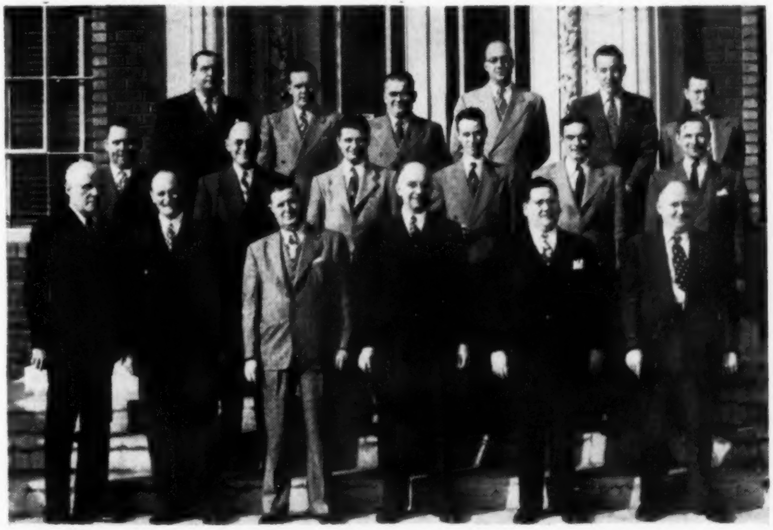
Adequate Wiring Forum Draws Large Attendance

CHICAGO—Over 100 representatives of all branches of the electrical industry attending the annual Adequate Wiring Forum held here, listened attentively to the panel discussions of markets for adequate wiring, certification, electrical living and adequate wiring promotional activities.

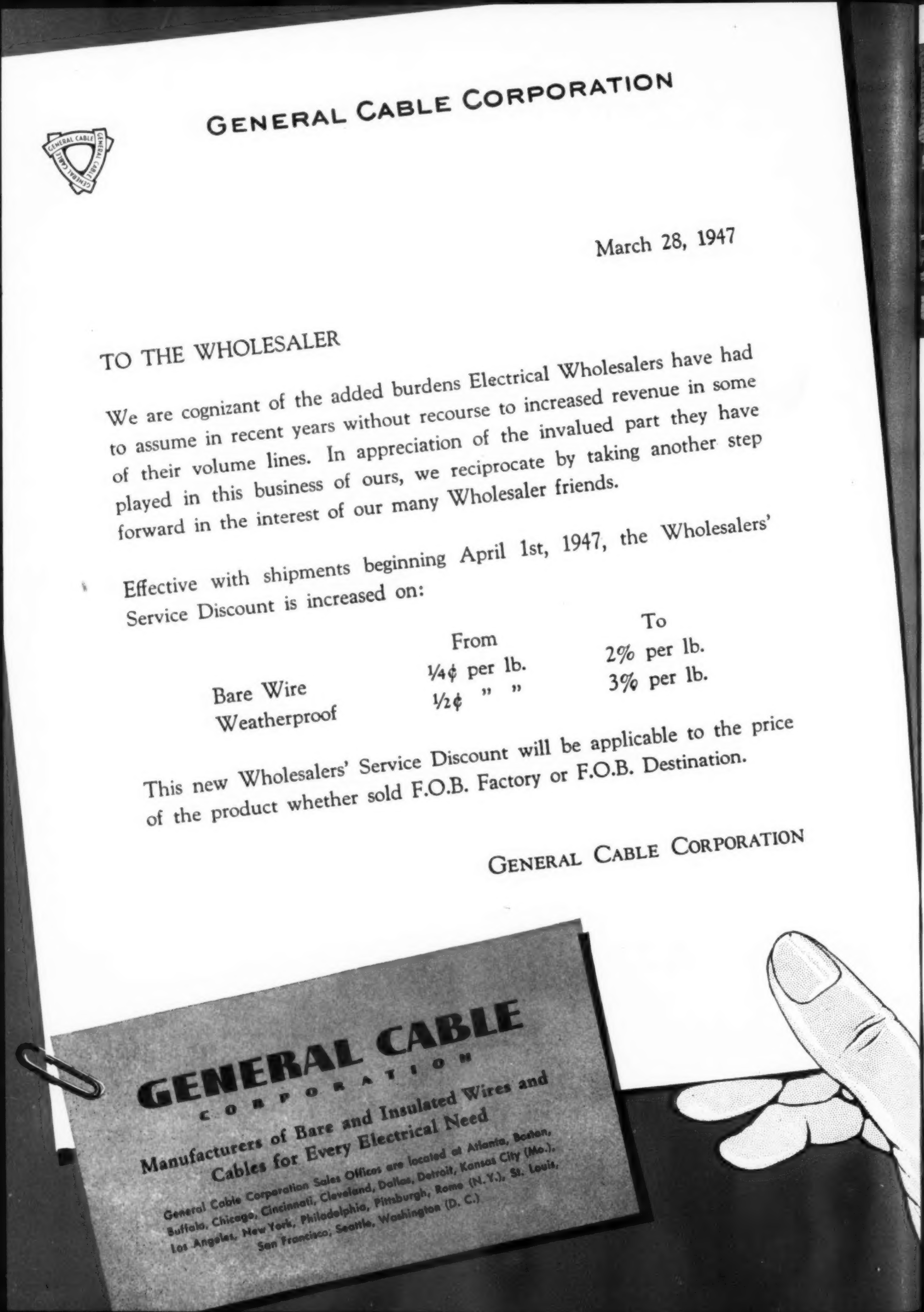
The forum, which was sponsored by the National Adequate Wiring Bureau, was staged immediately following the convention and exposition of the National Association of Home Builders.

In discussing market possibilities, Thomas S. Holden, president of F. W. Dodge Corp., estimated that 950,000 new homes would be built during 1947 and expressed the opinion that the light con-

(Continued on page 190)



SALES and production plans for 1947 were discussed at the annual sales meeting of the Western Insulated Wire Co., Los Angeles, held recently in that city. Pictured during the meeting are: Left to right, bottom row, Nelson Rush, Jack Bird, William Terry, Mil Klicpera, Frank Russell, William Weston; middle row, Jack Miner, E. H. Lewis, Gene Huxley, Thomas Dorsey, Rollin Dorsey, Herman Libkind; top row, Arthur Cutler, Walter Armour, Frank Keenan, John Carder, Thomas Deskin, Willis Rice.



GENERAL CABLE CORPORATION

March 28, 1947

TO THE WHOLESALER

We are cognizant of the added burdens Electrical Wholesalers have had to assume in recent years without recourse to increased revenue in some of their volume lines. In appreciation of the invalued part they have played in this business of ours, we reciprocate by taking another step forward in the interest of our many Wholesaler friends.

Effective with shipments beginning April 1st, 1947, the Wholesalers' Service Discount is increased on:

	From	To
Bare Wire	¼¢ per lb.	2% per lb.
Weatherproof	½¢ " "	3% per lb.

This new Wholesalers' Service Discount will be applicable to the price of the product whether sold F.O.B. Factory or F.O.B. Destination.

GENERAL CABLE CORPORATION

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CORPORATION

Manufacturers of Bare and Insulated Wires and Cables for Every Electrical Need

General Cable Corporation Sales Offices are located at Atlanta, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Kansas City (Mo.), Los Angeles, New York, Philadelphia, Pittsburgh, Rome (N.Y.), St. Louis, San Francisco, Seattle, Washington (D. C.)

LUNGEN & SON.
WATCHES, CLOCKS, JEWELRY.

1872

The famous "Lungen Bell" was first made in the basement of this store, where Robert Edwards and Adam Lungen founded Edwards and Company in 1872.

A "we" ad... with a "you" turn

WE COULD simply call this a "Statement of Company Policy" on our 75th anniversary. But we'd rather look at it another way—from *your* point of view. For these policies must work, first of all, to your benefit and profit. They must work for you *every* day.

You know they're doing just that, whether you've known us for three-fourths of a century or for only a year. Here are the policies in which Edwards so firmly believes:

The Wholesaler plays a vital role in the efficient and economical distribution of goods, and he is entitled to a fair profit for his services rendered.

The Contractor's work is essential in assuring the consumer the best possible job, and the contractor is entitled to a fair profit for the services he performs.

The Architect and Engineer have a special contribution to make in the design and construction of any job, no matter how small, and their fees are but fair compensation for their professional knowledge and experience.

The Retailer functions as the most efficient and economical source of supply for the consumer, and is entitled to a fair profit for his services rendered.

The Consumer is entitled to the newest and the best at the lowest cost, and continual progressive development must be carried on towards that end.

* * *

There are few manufacturers of prominence today who were in the *same business* 75 years ago. The friendship and cooperation of all the above have made it possible, and Edwards will keep faith with them during the next 75 years.

EDWARDS *and Company* NORWALK, CONN.

IN CANADA: EDWARDS OF CANADA, LTD.

America's Pioneer Manufacturer of Electric Signaling Equipment

Today the executive offices and main plant of Edwards and Company occupy this beautifully landscaped site on the Boston Post Road at Norwalk, Connecticut. From this modern plant comes the finest electric signaling, communication and protection equipment for homes, schools, hospitals, offices and industry.

1947

CROUSE-HINDS *Explosion-Proof*

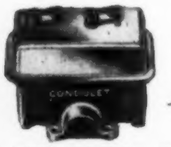
Electrical Equipment for Hospital Operating Rooms

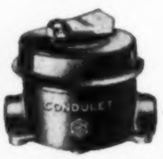
This NEW Bulletin contains complete listings of the most modern Equipment for the protection of doctors, nurses and patients from the hazards of EXPLOSIVE VAPORS in hospital operating rooms and other hazardous areas.

- **Lighting Fixtures**
- **Signal Lights**
- **Switches**
- **Plugs and Receptacles**
- **Thermostats**
- **Junction Condulets**

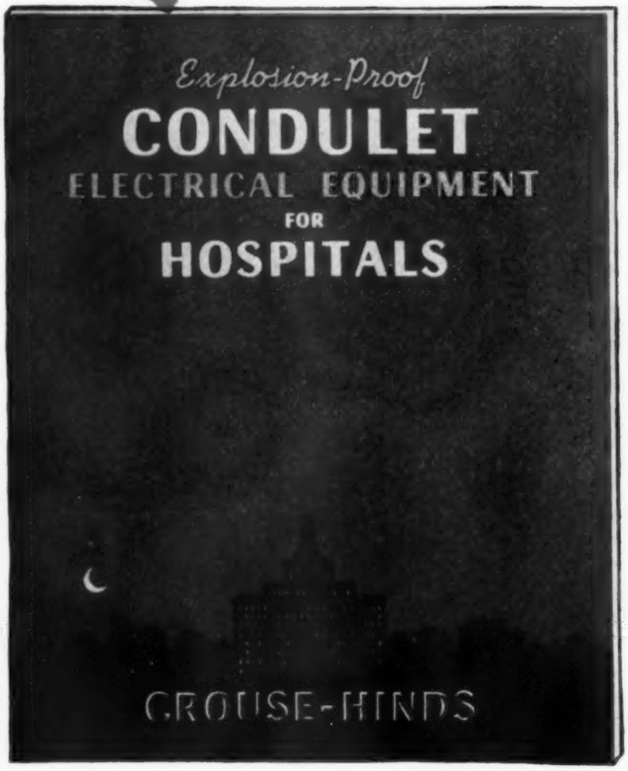
Type EVBX Explosion-Proof Lighting Fixture, Bracket Type

Type EVA Explosion-Proof Lighting Fixture, Pendent Type

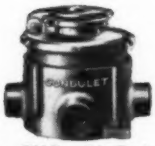

Type ESW Explosion-Proof Switch Condulet Two-Gang

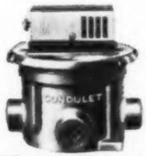

Type ENS Explosion-Proof Switch, Nurse's Call

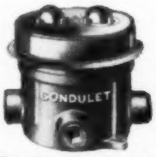
Type EHG Grounding Condulet


Explosion-Proof
CONDULET
ELECTRICAL EQUIPMENT
FOR
HOSPITALS

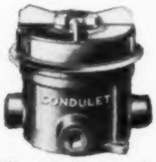
CROUSE-HINDS


Type EHS with Delayed Action Plug Receptacle


Type EHS with Thermostat


Type EHS with Signal Lights

Type EHS with Foot Operated Switch


Type EHS with Triple Switch Elbow or Hand Operated

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Our 50th Anniversary
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And Their Salesmen
Established 1920

Program

National Electrical Wholesalers Association

38th Annual Convention

TRAYMORE HOTEL • ATLANTIC CITY
May 4th through May 8th 1947

The Lighting Industry Exemplifies the Values in

PRODUCT CERTIFICATION

The meaning of the certification idea is quickly sketched by the experience of a group of reflector manufacturers who pioneered certification in 1919.

Working with incandescent lamp manufacturers, they developed a set of rigid specifications for their guidance. These specifications formed the basis of a test and certification program.

The product of each cooperating manufacturer was subject to periodic independent test.

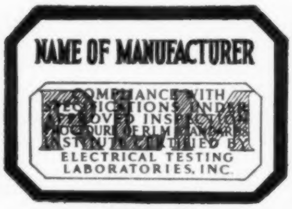
Reflectors which, under test, met or exceeded the set of specifications were identified by a CERTIFICATION LABEL. This procedure, during the 28 years of operation has met with favor from reflector USERS and similar certification projects have been adopted by other groups. In each case the effect has been far-reaching, helping the manufacturer, the distributor, the user, and the electrical industry.

The labels identifying such projects are shown in the illustration above.

ETL Know by Test

THIS IS A
Certified Lamp
CERTIFIED
ETL
AS TO COMPLIANCE WITH SPECIFICATIONS
The Manufacturer guarantees by affixing the label that this Portable Lamp is a duplicate of samples found by Electrical Testing Laboratories, Inc., in periodic tests of random samples to comply with Specifications of
CERTIFIED LAMP MAKERS
ELECTRICAL TESTING LABORATORIES, INC.

Label for Certified Lamp Makers


NAME OF MANUFACTURER
RLM
COMPLIANCE WITH SPECIFICATIONS UNDER APPROVED INSPECTION PROCEDURE OF RLM STANDARDS INSTITUTE CERTIFIED BY
ELECTRICAL TESTING LABORATORIES, INC.

Label for RLM Industrial Fixtures

LIGHT FOR LIVING
A·H·L·I·

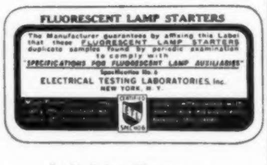
Label for Residence Fixtures

FLUORESCENT LAMP BALLASTS
The Manufacturer guarantees by affixing this Label that these FLUORESCENT LAMP BALLASTS duplicate samples found by periodic examination to comply with
"SPECIFICATIONS FOR FLUORESCENT LAMP AUXILIARIES"
which are sponsored by the Certified Ballast Manufacturers.
ELECTRICAL TESTING LABORATORIES, INC.
NEW YORK, N. Y.
©
11-45
CERTIFIED
ETL
SPEC NO. 6
FOR HIGH POWER FACTOR

Label for Fluorescent Ballasts

Certified
FLEUR-O-LIER
CERTIFIED
ETL
CERTIFIED in accordance with Test Requirements of Specifications of Fleur-O-Lier Manufacturers
11-45
ELECTRICAL TESTING LABORATORIES, INC.
NEW YORK, N. Y.

Label for Fleur-O-Lier Fixtures


FLUORESCENT LAMP STARTERS
The Manufacturer guarantees by affixing this Label that these FLUORESCENT LAMP STARTERS duplicate samples found by periodic examination to comply with
"SPECIFICATIONS FOR FLUORESCENT LAMP AUXILIARIES"
Specification No. 6
ELECTRICAL TESTING LABORATORIES, Inc.
NEW YORK, N. Y.
CERTIFIED
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SPEC NO. 6

Label for Fluorescent Starters

Using above labels, the number of manufacturers having testing and certification contracts with ETL are:

RLM STANDARDS INSTITUTE	12
FLEUR-O-LIER MANUFACTURERS	27
CERTIFIED LAMP MAKERS	88
AMERICAN HOME LIGHTING INSTITUTE	19
CERTIFIED BALLAST MANUFACTURERS	7
CERTIFIED STARTER MANUFACTURERS	10

Results of Certification for the Welfare of the Electrical Industry

1. Specifications for manufacture that are really in the public interest.
2. Earnest efforts to produce good products that comply with the specifications.
3. Independent certification to the public of such compliance when this is proved by test.

The purpose of a certification is simply to provide at SMALL COST a means whereby the public recognizes the product to be of acceptable quality, uniform in manufacture, constructed to a standard in which it has confidence. This confidence being inspired since the qualities are based on *independent* investigation.

ETL provides the impartiality and technical skill to make certification a service to *help* all makers and users of lighting equipment.

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National Electrical Wholesalers Association
THIRTY-EIGHTH ANNUAL CONVENTION

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D. M. SALSBURY—Vice-President of N.E.W.A. and Chairman of Apparatus and Supply Division.
E. B. INGRAHAM—Chairman of Appliance Division of N.E.W.A.

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J. D. NICHOLSON—The Mine & Smelter Supply Co., Denver.
H. D. ROSETH—Co-Op Electric Supply Co., Chicago.
H. O. SMITH—The Hardware & Supply Co., Akron.
H. H. TULLY—Doubleday-Hill Electric Co., Pittsburgh.

SUNDAY—MAY 4, 1947

Afternoon

1:30—Rose Room—Mezzanine Floor—Meeting of Executive and Management Committees.

4:30—Rose Room—Meeting of Above, with Chairmen of Commodity & Functional Committees.

MONDAY—MAY 5, 1947

Morning

10:45—American Room—Opening Session for all Members and Guests.

Report of Program Committee—Mr. D. M. Salsbury, Chairman.

Address—Mr. John L. Busey, President of N.E.W.A.
Report—Mr. Charles G. Pyle, Managing Director.
Counsel's Report—Dana T. Ackerly, Esquire.

Afternoon

2:00—American Room—General Sessions for all Members and Guests.

SESSION SPONSORED BY APPLIANCE DIVISION OF N.E.W.A.

Mr. E. B. Ingraham, Presiding.

"THE COMING ELECTRICAL AGE"—Part I.

Report—Mr. E. B. Ingraham, Chairman of Appliance Division.

Address—"Your Opportunity in the Coming Electrical Age"—Mr. George E. Whitwell, Vice President, Philadelphia Electric Company.

Sales Promotion and Sales Training Committee—Mr. George F. Kindley, Chairman.

Slide Film—"Personnel Improvement—By Accident or By Design?"—Mr. Morris I. Pickus, President, The Personnel Institute, Inc.

Playlet—"Tool Up for Sales Training"—Presented for N.E.W.A. by Mr. E. T. Brewer, Mr. R. O. Doerr, Mr. F. C. Pesveyc, Mr. W. B. Statham and Mr. C. A. Stevens—of Public Service Electric and Gas Co., Newark, N. J.

Rural Markets Committee—Mr. John T. Urban, Chairman.

Motion Picture—"Singing Wires," sponsored by "Farm Journal."

Address—"Electrical Interdependence"—Mr. Herbert Metz, Chairman, N.E.W.A. Planning Committee.

Evening

8:00—Meetings of the following Commodity Committees of the Appliance Division:

(All interested members of the Association and manufacturer guests are cordially invited to attend.)

Major Appliances—Rose Room, Mezzanine Floor—Mr. I. W. Danforth, Chairman.

Radio, Television and Tubes—Stratosphere Room, 8th Floor—Mr. Harry Alter, Chairman.

Small Appliances—Belvedere Room, 11th Floor—Mr. J. I. Bogdan, Chairman.

TUESDAY—MAY 6, 1947

Morning

9:30—American Room—Meeting of Appliance Division.

(All N.E.W.A. Members and Guests Welcome.)

Mr. E. B. Ingraham, Chairman, Appliance Division, Presiding.

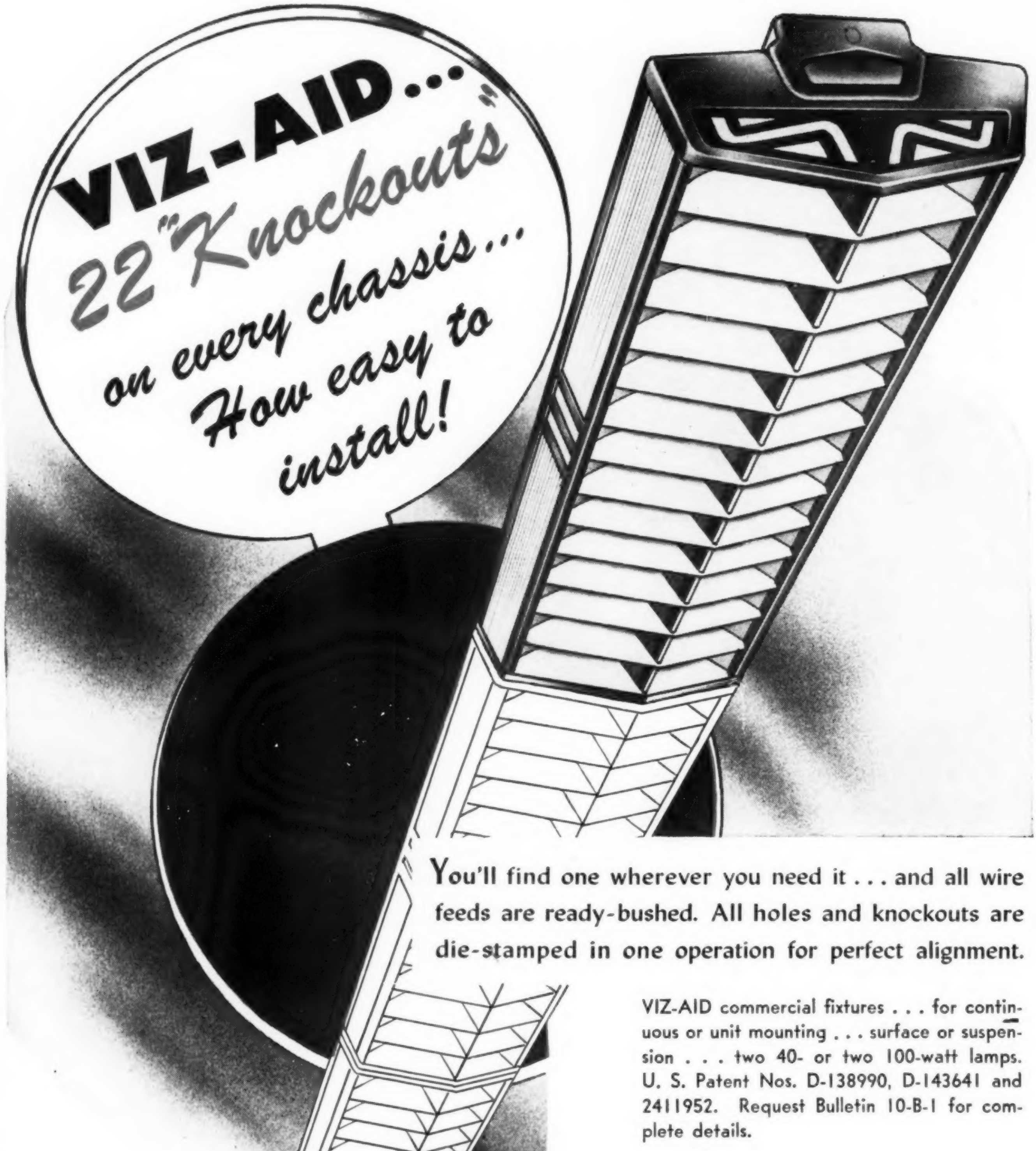
Legislative Committee—Mr. Francis E. Stern, Chairman.

Sales Promotion and Sales Training Committee—Mr. George F. Kindley, Chairman.

Store Management and Store Arrangement Committee—Mr. K. G. Gillespie, Chairman.

Time Payment Financing Committee—Mr. H. S. Schiele, Chairman.

Warehousing Committee—Mr. J. J. Kaske, Chairman.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How easy to
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You'll find one wherever you need it . . . and all wire feeds are ready-bushed. All holes and knockouts are die-stamped in one operation for perfect alignment.

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IT'S EASY TO SEE WHEN IT'S

DAY-BRITE

Lighting

296

11:30—American Room—Elections—Appliance Division.

Mr. E. B. Ingraham, Chairman, Appliance Division, Presiding.

Afternoon

2:00—American Room—Meeting of Appliance Division.

(All N.E.W.A. Members and Guests Welcome.)

Mr. E. B. Ingraham, Chairman, Appliance Division, Presiding.

Major Appliances Committee—Mr. I. W. Danforth, Chairman.

Radio, Television and Tubes Committee—Mr. Harry Alter, Chairman.

Small Appliances Committee—Mr. J. I. Bogdan, Chairman.

Review of Appliance Division Program—Mr. John L. Busey, President of N.E.W.A.

4:30—Belvedere Room—Elections—Apparatus and Supply Division.

Mr. D. M. Salsbury, Chairman, Apparatus and Supply Division, Presiding.

Evening

6:00—Rose Room—N.E.W.A. Cocktail Party for all Members and Guests.

7:30—American Room—Annual Banquet for all Members and Guests.

Program of music and entertainment.

WEDNESDAY—MAY 7, 1947

Morning

9:30—Election Meetings for all N.E.W.A. Zones.

10:30—American Room—General Session for N.E.W.A. Members.

Mr. John L. Busey, President of N.E.W.A., Presiding.

Consideration of Changes to Association's By-laws.

Consideration of Suggested Revisions of Trade Practice Rules of the Electrical Wholesale Industry.

Report of Finance Committee—Mr. A. H. Nicoll, Chairman.

Report of Operating Cost Committee—Mr. L. M. Nichols, Chairman.

Special Presentation of Bureau of Census Data on Wholesalers—Mr. O. Fred. Rost, Editor, "Electrical Wholesaling."

Report of Resolutions Committee.

Announcement of Elections to Board of Governors.

Noon

12:00—Rose Room—Luncheon and Organization Meeting for newly elected members of the Board of Governors.

Afternoon

2:30—American Room—General Session for all Members and Guests.

Introduction of President-elect—by Mr. John L. Busey.

SESSION SPONSORED BY APPARATUS AND SUPPLY DIVISION OF N.E.W.A.

Mr. D. M. Salsbury, Presiding.

"THE COMING ELECTRICAL AGE"—Part II.

Report—Mr. D. M. Salsbury, Chairman of Apparatus and Supply Division.

Address—"Go All Electric"—Mr. R. Stafford Edwards, President, National Electrical Manufacturers Association.

Presentation of Industrial and Commercial Lighting Committee—Mr. W. W. Booth, Chairman; and Residential Lighting Fixtures Committee—Mr. J. C. Dupont, Jr., Chairman.

"Lighting America at Home and at Work," presented through the courtesy of General Electric Company, Lamp Department, Nela Park, Cleveland, Ohio, and introduced by Mr. W. H. Robinson, Jr., Manager, Advertising Department, Nela Park.

Motion Picture—"Dawn of Better Living."

Speaker: Mr. A. Carl Bredahl, Manager and Technical Director, Better Homes, Westinghouse Electric Corp., Pittsburgh, Pa.

Evening

8:00—Meetings of the following Commodity Committees of the Apparatus and Supply Division:

(All interested members of the Association and manufacturer guests are cordially invited to attend.)

Electronics—Belvedere Room, 11th Floor—Mr. H. P. Litchfield, Chairman.

Fan and Ventilating—Mandarin Room, Mezzanine Floor—Mr. W. L. Perry, Chairman.

Sub-Committee of Residential Lighting Fixtures Committee with Liaison Committee of American Home Lighting Institute—Rose Room, Mezzanine Floor—Mr. J. C. Dupont, Jr., Sub-Committee Chairman, Presiding.

THURSDAY—MAY 8, 1947

Morning

9:30—American Room—General Session for all Members and Guests.

SESSION SPONSORED BY APPARATUS AND SUPPLY DIVISION.

Mr. D. M. Salsbury, Chairman, Apparatus and Supply Division, Presiding.

Apparatus and Control Committee—Mr. John M. Newton, Chairman.

Wires and Cable, and Armored Conductor Committee—Mr. D. Lyle Fife, Chairman.

Industrial and Commercial Lighting Committee—Mr. W. W. Booth, Chairman.

Conduit Fittings and Boxes Committee—Mr. R. A. Stott, Chairman.

Wiring Devices Committee—Mr. H. D. Roseth, Chairman.

Afternoon

2:30—American Room—General Session for all Members and Guests.

SESSION SPONSORED BY APPARATUS AND SUPPLY DIVISION.

Mr. D. M. Salsbury, Chairman, Apparatus and Supply Division, Presiding.

Outside Construction Materials Committee—Mr. L. W. Taylor, Chairman.

Electronics Committee—Mr. H. P. Litchfield, Chairman.

Fan and Ventilating Committee—Mr. W. L. Perry, Chairman.

Residential Lighting Fixtures Committee—Mr. J. C. Dupont, Chairman.

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H. D. Roseth
CHAIRMAN

Reports the

MEETING OF THE WIRING DEVICES COMMITTEE

National Electrical Wholesalers Association

Chairman H. D. Roseth convened the meeting at 10:15 a.m. He announced with regret the death of August Kubec, an active member of the Committee, and requested all present to rise in a token of silent respect to this departed member.

Managing Director Pyle welcomed the members and expressed appreciation of the good attendance, especially in view of the severity of the weather. He spoke about the methods of conducting the Association Committee meetings. He reminded the members of the Convention to be held in May, recommending that in view of the very large attendance expected, it is highly advisable to send in hotel reservations promptly.

PACKAGING AND LABELING

The Committee further considered the suggestion discussed at its previous meeting with regard to conducting a study among the Association's members on the packaging and labeling of wiring devices. It was felt that a study might be unnecessary at this time.

The Committee was of the opinion that many of the wiring device items should be packaged individually and these units should be placed in suitable cartons and standard packages with clear identification on each, containing illustration, quantity, catalog number and a brief but fitting description of the contents. Packages marked in this manner will simplify the handling of wiring devices through the various stages of warehouse operations. It will also be of valuable assistance in teaching new employees and make them familiar with the merchandise in the shortest possible time.

The wholesaler's services to his customers will be improved and speeded up. Generally speaking the wiring device manufacturers have always cooperated in this respect and it was indicated that this will be continued and improved upon at every opportunity.

PRESENT INDUSTRY CONDITIONS

The Chairman called upon the members present to express their opinions as to the conditions in the wiring devices field in their respective areas. The consensus of those present can be summed up as follows:

Shortages still continue but here and there some improvements are noticeable—certain few items seem to be overpriced. Many of the staple items in the lower priced field are still out of production. It was the unanimous opinion of those present that the supply is not at all sufficient to meet the combined demand of new residential, commercial and industrial

PRESENT: Members of the Committee:
H. D. Roseth, Chairman, Co-op Electric Supply Company, Chicago, Illinois.
E. C. Heidt, Turtle & Hughes, Inc., Elizabeth, New Jersey.
W. E. Henges, Graybar Electric Co., Inc., Cleveland, Ohio.
Lucille S. Klose, L. R. Klose Electric Company, Kalamazoo, Michigan.
Jacob Hemnes, Kubec Electric Co., Chicago, Ill.
G. M. Parr, Parr Electric Co., Inc., Newark, N. J.
H. E. Rasmussen, Peerless Electric Supply Company, Indianapolis, Indiana.
K. M. Taylor, Wyandotte Electric Supply Co., Wyandote, Michigan.
N.E.W.A. Staff:
Chas. G. Pyle, Managing Director.
Alfred Byers, Secretary.

construction as well as material needed for essential repair and maintenance purposes.

It has been reported that through governmental efforts a manufacturer was located who was willing to accept an order for prompt delivery of one million single pole flush toggle switches and duplex receptacles. This material was to be used in Veterans low cost housing construction sponsored by Federal Housing Agencies. If the above is true it is hoped that other manufacturers will also find a way to make more of the same type of material for such very important and worthy purposes.

The present "out of balance" condition of some wholesalers' wiring device inventories of the industrial type, was emphasized. The suggestion was made that the Association members who have over stocks of any particular items should so inform other members in order that they may have an opportunity to purchase such items which they may need, and for the present at least, cannot procure in any other way.

During the discussion of present conditions it was mentioned that when the committee met, about a year ago, it appeared that conditions would be much improved by this time. That optimism has not proved true, and in the committee's opinion, wholesalers are now in no better position, materially, than they were then.

VETERANS' HOUSING PROGRAM

The essential part which wiring devices takes in home building was stressed. The particular urgency of the Veterans' Housing Program was discussed, and the committee urged all electrical wholesalers to use every possible practical effort to make sure that essential wiring devices are channeled into the Veterans' Housing Program which might be in progress in their own area. The committee felt that the electrical wholesalers might be in a position to render considerable assistance in that particular respect and it felt moreover that electrical wholesalers would wish to do everything within their means to improve the present very unsatisfactory condition of Veterans' Housing.

OPERATING COST STUDY RECOMMENDED

Consideration was given to the increased cost of doing business and the need, therefore, for wholesalers to have available helpful information for their guidance. Accordingly, the committee requested the Operating Cost Committee to conduct a study of the cost of handling wiring devices for the year 1946 as compared with the year 1941. The Committee also requested that if possible a report on such study be distributed to the general membership prior to the annual Convention next May.

PLUG FUSES

Although some shortages in the supply of plug fuses are still noted, the committee felt that the situation is generally better. It was their opinion, however, that the problem of shortages is still acute in many sections of the country. Wholesalers still look hopefully to manufacturers for further improvement, and especially so far as 15 Ampere Fuses are concerned.

BACK-ORDERS

Whether or not any improvement has been experienced generally on the subject of back-orders since the committee's last meeting, could not be ascertained. According to the discussion, it would appear that the back-order situation is still serious in the operations of wholesalers. The committee believed that every member would benefit by making certain that his back-orders were being given current inspection within his own organization.

SESSIONS WITH MANUFACTURERS

Following the recess for luncheon, Chairman Roseth reconvened the meeting at 2:00 p.m. and welcomed the following manufacturers who had been able to accept the invitation of the committee:

H. L. Everest, Arrow-Hart & Hegeman Elec. Co., Hartford, Conn.; Harold Hey, The Bryant Electric Company, Bridgeport, Conn.; G. S. Alcorn, General Electric Company, Bridgeport, Conn.; J. Amsterdam, Leviton Mfg. Company, Brooklyn, N. Y.; C. L. Nicholson H. Pass & Seymour, Inc., Syracuse, N. Y.

PRESENT AND PROSPECTIVE CONDITIONS

The Chairman informed the manufacturer guests of the discussion during the committee's session in the morning with regard to general conditions in the wiring devices field, and the prospects for the immediate future. He then requested the Secretary to read several communications from members of the committee and from invited manufacturer guests who had been unable to attend the meeting, but who had written their own views on industry conditions. Mr. Roseth then invited the manufacturers present to give their own opinions on the various problems confronting the industry at present, and their judgment as to what may be expected during the first half of this year.

Each manufacturer present spoke in answer to the chairman's invitation and their remarks and the discussion which followed proved interesting and valuable. One manufacturer stated that he expects greater production this year than in 1946, but still not enough in quantity to meet demands. He thought that the total production of wiring devices today is sufficient at the present moment, amply to take care of the present housing program, if the materials needed for repair and maintenance purposes is not taken into consideration. Continued production, he said, would depend upon the availability of raw materials, a stable labor condition, and adequate manufacturing equipment. Steel, in his opinion, will be short for the next six to nine months; and phenolics will likely be in similar short supply. Many wiring device items at the present time, he said, were going mainly into the maintenance and repair field. Wiring devices, he concluded, would continue to be scarce all through 1947, and even with present manufacturing equipment being fully utilized the demand still could not be met during the year.

Another manufacturer held the view that demand exceeds the supply, but if wiring devices, which are being supplied, were channeled into the building industry much of the pressure being exerted by that industry would be removed. He said that he had noticed too much diversion of this critical material to retail outlets. Another continuing serious problem, in his opinion, is the pyramiding of orders by customers of wholesalers. Increasing production will be difficult throughout this year, he believed, and particularly in view of the difficulty of acquiring steel and copper. He emphasized that Bakelite powder is even more difficult to obtain. Whether or not there is any improvement in the overall picture of the industry would depend, he declared, on the easing of strikes and the greater availability of materials. This manufacturer said that under present abnormal conditions he believes in producing certain selected items in quantity rather than in scattering his production in small quantities over many items.

Still another manufacturer voiced concurrence with the views already expressed, and added that with raw materials available and strikes eliminated, and particularly with the full use of equipment on hand plus that which his company plans to set-up, production will be substantially increased.

His production of metal shell sockets, sign receptacles and other wiring devices usually supplied to portable lamp and lighting fixture manufacturers, will be greatly increased soon and a larger share made available for wholesalers' distribution beginning about the second quarter of 1947.

The opinion of another manufacturer was that this year has every appearance of showing considerable improvement over last year. The first half of 1947 may be 25 percent to 30 percent over the first half of 1946 so far as his production of wiring devices is concerned. According to this manufacturer, wiring devices are not responsible for any delay in the building program. Moreover, he claimed that increased production of wiring devices will keep pace with increases in requirements in the building program.

Fuse plugs are appearing in the market in increased percentage and during 1947 the quantity of them will be well increased. New products in the wiring device field are at present in the planning stage. Actual production and public announcement of them, this manufacturer stated, are not in immediate prospect, inasmuch as production difficulties on present items are far too great to give any thought to the production of any new lines.

In the opinion of the final speaker among the manufacturers, new products are in prospect as had been stated. He emphasized the fact, however, that they will be supplemental to, and will not replace present items. There is no need, said this manufacturer, for wholesalers to be hesitant about ordering stock replacements because they may believe that new items to be forthcoming will cause present similar items to become obsolete. This manufacturer also expressed the view that production has improved materially, and that the wiring device field is consistently showing greater progress within the bounds of restrictions imposed by strikes, material shortages and equipment.

Following these direct observations made by manufacturer guests present, there was some discussion with regard to the statement that wiring devices continue to be sold to the consuming public through electrical dealer channels as well as hardware stores, house furnishing stores, drug and variety stores, mail order houses and chain stores. These outlets are likely to increase and remain important factors in the ultimate sale of electrical wiring devices as long as they continue to draw the buying public into their stores. It is one of the responsibilities of the electrical wholesaler to supply these outlets with their fair share of wiring devices within the limitations of the present conditions and in proportion to the currently available supply and inventory.

Discussing further the present situation regarding the availability of wiring device items, the suggestion was offered that wholesalers review the orders that they have placed with manufacturers "for direct shipment" in order that they might have an opportunity to determine if these orders are still valid and have not been satisfied through other channels.

In this connection it was suggested also that wholesalers, when receiving orders from contractors for large building construction projects, attempt to find out by direct inquiry of such contractor customer, the definite schedule of dates the material will be needed. It was explained that if electrical wholesalers did follow these two suggestions they would contribute to the possibility of improving the present situation regarding manufacturers' deliveries.

There being no further business to come before the meeting it was adjourned by the chairman who expressed the committee's appreciation of the manufacturers' cooperation in journeying the distances they had come to attend the meeting, and to contribute so generously their very helpful views.

Respectfully submitted,

H. D. ROSETH, ***Chairman,***
Wiring Devices Committee

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John M. Newton
CHAIRMAN

Reports the

MEETING OF THE APPARATUS AND CONTROL COMMITTEE

National Electrical Wholesalers Association

REPORT OF LAST MEETING

For the information of the meeting, the chairman requested the secretary to read the report of the meeting of the committee's meeting at Chicago on April 24, 1946.

MANAGING DIRECTOR'S REMARKS

Mr. Pyle reviewed for the benefit of the committee the method for holding meetings of association's committees. He stated that in his opinion the last meeting of this committee had been a most constructive one and he looked forward to this meeting resulting in further helpful information for the entire membership.

Referring to the 38th Annual Convention to be held at Atlantic City May 4-8, 1947, Mr. Pyle went into some detail as to the plans for the program. He explained also that the convention actually would be divided into a separate series of sessions for the Appliance Division and for the Apparatus and Supplies Division. The advance registrations, he said, reflected that there is a very widespread interest throughout the entire membership and the convention, therefore, would most likely be very well attended.

SIMPLIFICATION SUGGESTED IN ARRANGING MANUFACTURERS PRICING SCHEDULES

The committee gave some consideration to the method by which manufacturers set up their price schedules on motors, transformers, control equipment, safety switches, and fuses. It was the committee's opinion that the present method used by manufacturers to change price schedules is highly confusing to wholesalers and causes considerable additional clerical work which is costly to the wholesaler. The complicated manner of setting up manufacturers' schedules appears unwarranted in the opinion of the committee. A simplification of those schedules would improve the wholesaler's efficiency as well as his service to his customers.

This complicated schedule of pricing serves to minimize the effectiveness of the wholesaler's selling

PRESENT: Members of the Committee—
John M. Newton, Chairman, Oakes Electrical Supply Co., Holyoke, Mass.
H. J. Baitinger, Baitinger Electric Co., Inc., New York, N. Y.
W. H. Bingham (Sub. for M. P. Nickerson), Westinghouse Electric Supply Co., New York, N. Y.
W. M. Corrin, Corrin Electric Co., Oil City, Pa.
E. J. Dailey (Sub. for E. J. Mayer), Graybar Electric Co., Inc., New York, N. Y.
T. M. Jones, General Electric Supply Corp., Bridgeport, Conn.
R. L. McCalley, The Monumental Electrical Supply Co., Baltimore, Md.
J. W. Saladine, Electrical Supplies, Inc., Hartford, Conn.
A. C. Schielke, Watson-Flagg Sales Corp., Paterson, N. J.
Guest—
H. P. Litchfield, Graybar Electric Co., Inc., New York, N. Y.
N.E.W.A.'s Staff—
Wm. M. Fenn, Esq., Counsel
Alfred Byers, Secretary
Chas. G. Pyle, Managing Director

efforts because the wholesalers' salesmen find the price schedules altogether too confusing. It was felt that the wholesaler could do a much improved merchandising job in these particular lines if this suggested simplification would be favorably considered by the manufacturers.

MANUFACTURERS' DELIVERIES

The committee discussed at some length the current situation so far as the following commodities are concerned: motors, transformers, control equipment, safety switches and fuses. According to the information developed at the meeting it was evident that manufacturers are experiencing considerable difficulty in the procurement of materials needed in manufacturing. Likewise, difficulties are arising constantly in the actual production of finished goods also. Accordingly, it was the consensus of the committee that delivery schedules hardly appear headed for any improvement in the near future.

WHOLESALERS' INVENTORY

Inventories in wholesalers' establishments are in an unbalanced condition today according to all of the remarks by committee men. Pyramiding of orders was felt to be one serious factor affecting the inventory situation. Another factor which disturbed the members of the committee was the matter of manufacturers' production. At the present time it seems that manufacturers produce items without sufficient regard to actual requirements. This results in overproduction in one item and none or at least a very small quantity of products in others which it may happen are in heavy demand.

It was pointed out that this situation is one which the manufacturer seems hardly able to avoid. It was stated, moreover, that the wholesaler himself must share some of the responsibility for the present unbalanced inventory situation. The pyramiding of orders for his customers must be guarded against by the wholesaler. Another caution he must exercise is the current reviewing of his own orders to manufacturing suppliers so as to be certain that his orders include the material he needs and do not include items not required. This, after all, also has an affect on both production at the manufacturer level and inventories in the wholesaler's warehouse.

ELECTRONIC DEVICES AND CONTROL

H. P. Litchfield was presented to the committee's meeting by the chairman. Mr. Litchfield explained that the Electronics Committee, of which he is chairman, had requested him to attend this meeting in order to explain that committee's activities. His committee felt that there might be some overlapping of interest on the part of his committee and this committee.

Mr. Litchfield stated that his committee has no desire to give consideration to matters which properly belong within the scope of the Apparatus and Control Committee. However, Mr. Litchfield said that the Electronics Committee offers its help to the Apparatus and Control Committee whenever that committee may feel it would be helpful to them to consult the Electronics Committee in the consideration of commodity problems which may in some measure affect both committees.

Mr. Newton expressed appreciation of the helpful offer by the Electronics Committee and assured Mr. Litchfield that the Apparatus and Control Committee likewise is already and very willing to reciprocate in the matter of such assistance.

TYPE "A," "C" AND "D" SWITCHES

The committee's discussion showed that there is considerable feeling that some simplification in the number of types of safety switches would be very beneficial to the industry. At the same time it was emphasized that there is demand for some of each type of safety switch that is manufactured.

ALUMINUM WIRE

The possible effects of the use of aluminum wire on copper contacts and compression connectors was discussed. The difficulty to date has been in working out the practical use of connectors and other fittings with aluminum wire. Local electrical inspection approval is another requirement which remains still to be worked out. There are also technological problems to be solved in order to make the use of aluminum wire practical and safe.

SUGGESTIONS FOR FUTURE OPERATION OF COMMITTEE

The committee discussed at some length the possibilities for improving the effectiveness of the committee's activities. One means suggested was that it would be helpful to have small sub-committees to collect factual data on particular subjects. These data would in turn then be readily available to the overall committee for consideration at their meetings. These sub-committees were suggested for larger equipment; smaller equipment, including instruments; motors and control; fuses and terminals. Capacitors should also be included in the committee's product scope. It was the consensus of the meeting that the sub-committees, as suggested, should meet at their own discretion and in a purely advisory capacity for the purpose of studying these details concerning any particular commodity problem and report their findings to the overall committee.

SESSION WITH MANUFACTURERS

The following manufacturers were present:

F. G. Kraut, Frank Adam Electric Co., New York, N. Y.; F. D. Popowics, Allen Bradley Co., Milwaukee, Wis.; H. L. Everest, Arrow-Hart & Hegeman Elec. Co., Hartford, Conn.; L. H. McClure, The Clark Controller Co., Cleveland, Ohio; W. E. Addicks, Cutler-Hammer, Inc., Milwaukee, Wis.; G. L. Irvine, General Electric Company, Schenectady, N. Y.; F. W. Merkel, Peerless Electric Co., Warren, Ohio; M. W. Parmalee, Square D. Company, Detroit, Mich.; C. E. McKenna, Wadsworth Elec. Mfg. Co., Inc., Covington, Ky.; R. W. Scott, Westinghouse Electric Corporation, East Pittsburgh, Pa.

The chairman extended a very cordial welcome to the manufacturer guests. He expressed appreciation of their accepting the invitation to meet with the committee. He further suggested to them that in discussing problems with the committee the manufacturers consider that in speaking to the committee they do so with the thought in mind that they are discussing problems with their own salesmen.

The views expressed by members of the committee at its morning session were confirmed by the manufacturers who supplied some additional thoughts on the subjects which were covered. On the subject of delivery schedules on motors, transformers, controls, safety switches and fuses, the manufacturers informed the committee that the situation regarding the production of fractional horse-power motors is still a bad one. In the case of integral motors, the situation also is not too good. Conditions are considerably better, however, they reported, so far as the larger motors are concerned. Many factors affect the current situation. Chief among these, it was explained, were the inadequacy of the copper supply, the same with regard to sheet steel, and in addition the discontinuance of production due to shut-downs caused by labor difficulties.

It was the opinion of the manufacturers that conditions will be corrected probably before many months have passed. The manufacturers felt that when improvement comes it can be expected to be very rapid. In the case of control, engineering is an important factor in the present situation. Production of controls at present is about 32-40 weeks behind requirements in some cases and very little better in most others. The committee suggested to the manufacturers that they could do wholesalers a real practical service by informing them promptly whenever deliveries need necessarily to be deferred and what the expected delivery date will be.

The present unbalanced inventory situation in wholesalers' establishments is caused, the manufacturers felt, by a considerable pyramiding of orders by wholesalers' customers. This pyramiding, they felt, was carried through to some appreciable extent on the part of wholesalers also. Just what correctives might be applied to overcome this condition could not be suggested. The question was discussed at considerable length but no uniform conclusion or solution could be reached.

War-time surpluses of apparatus and control materials were not believed to be available to any material extent according to the opinions expressed by the manufacturers.

The possibility for heater simplification was discussed at length at the session. Simplification would depend upon engineering which, according to the manufacturers, is a matter about which there is considerable difference of opinion among engineers. The manufacturers felt that the consolidation of such views among the industry as a whole is an extremely remote possibility.

The field of electronic devices and control is a limited one so far as wholesale distribution is concerned. Such was the opinion of the manufacturers who, moreover, stated that this field is pretty largely, at present at least, one where technical installations abound. It was felt that the electrical wholesaler, in the normal sense, is not adequately enabled at this time to handle this type of distribution. Technicians are indispensable and until wholesalers establish specialized departments, including well-trained technicians, their opportunities for distributing electronic devices and controls will necessarily be limited.

In bring the meeting to a close, the chairman thanked the manufacturers for their good attendance and for the very helpful contributions all of them had made to the discussion. He expressed the hope that the manufacturers had benefited from the discussion as he was sure the members of the committee had, as well as the entire membership to whom the information would be made available by the published report covering the committee's meeting.

There being no further business to come before the meeting, it adjourned.

JOHN M. NEWTON, ***Chairman,***
Apparatus and Control Committee

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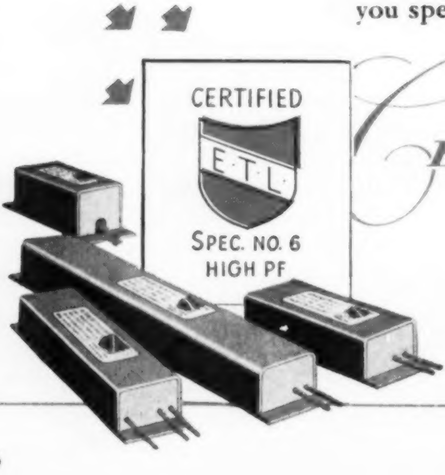

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J. J. Bogdan

CHAIRMAN

Reports the

SMALL APPLIANCES COMMITTEE

National Electrical Wholsalers Association

The Committee decided to dispense with the reading of the report of its previous meeting.

INFORMATION TAGS

The chairman stated that some manufacturers are now using information tags but the consumer apparently does not usually follow the instructions. There have been many returns of appliances to distributors. Those present agreed that the larger manufacturers are providing such tags but the practice is not yet general. Mr. Hill said that this subject would be on the convention agenda of the Major Appliances Committee to be discussed with manufacturers present as guests at that time. Following discussion it was decided to place the subject of Appliance Information Tags on the agenda for this committee at the next meeting at Atlantic City during the Convention.

IT WAS VOTED that as a means of aiding retailers to increase the sale of electrical appliances to consumers, this Committee recommends that manufacturers affix to each appliance shipped from their plants an informative label or "information tag" which concisely sets forth the salient sales features as a protective measure in the interest of the consumer purchaser and as a mean of assisting the dealers' salesmen in doing a more efficient sales job.

BASIC SALES TRAINING PROGRAM

At the request of the chairman, Mr. Hill gave the following report of the present status of this activity. The Basic Sales Training Program has been very well received, with some 25,000 trainees having already completed the course. Most of the courses have been sponsored by electrical leagues, or by utility companies. The program provides basic sales training at the lowest cost, in view of the fact that it was developed by a group of top experts in the industry. Excellent testimonials have been received from those who have taken the course and it is important to note that a great many of the older salesmen have used the program as a "refresher" course. Some key dealers are beginning to be reached, but more could be accomplished in that direction when the electrical retailer has more products to sell and is completely convinced that he is operating in a buyers' market.

SCIENTIFIC PERSONNEL SELECTION PROGRAM

The Scientific Personnel Selection Program has also been very well received, but, as has been

PRESENT: Members of the Committee:

- **J. I. Bogdan, Chairman, B. & B. Electric Co., Cincinnati, Ohio.**
- **Robert Beller, Beller Elec. Co., Newark, N. J.**
- **F. J. Greene, Jos. Kurzon, Inc., New York, N. Y.**
- **E. E. Morton, Westinghouse Elec. Sup. Co., Chicago, Ill.**
- **J. P. Wear, Jr., Graybar Elec. Co., Inc., Phila., Pa.**
- **E. A. Wilson, Colonial Elec. Co., Inc., Phila., Pa.**

Association's Staff—

- **K. B. DeBevoise, Esq., Counsel**
- **Alfred Byers, Secretary**
- **Robt. C. Hill, Director-Appliance Division**
- **Albert Pfaltz**

previously stated, its full effectiveness will not be realized possibly for 4 or 5 more years. Greater consideration and understanding of the value of this program is needed especially on the part of independent distributors and retailers. All three of the national chains have retained the Personnel Institute and one of these organizations is conducting the activity through to all its dealers.

Mr. Wear described the program as good and the aptitude tests, which are part of it, as being of great value. Scientific hiring, he said, helps you "bring up a salesman's batting average. There is a real need to train the salesmen now employed by electrical dealers. This problem soon might become serious, Mr. Hill added, when appliances are available in much larger quantities. Some dealers are already going out of business.

The chairman stated, for the record, that this committee recognizes the importance and value of both the Basic Sales Training Program and the Scientific Personnel Selection Program and urges the wider use of both throughout the industry and especially by N.E.W.A. members.

It was pointed out by Mr. Hill that the Major Appliances Committee will ask manufacturers to endorse both programs at the convention meeting. At that time it will also be pointed out that there is duplication and avoidable monetary waste in cases where manufacturers have developed their own basic sales training courses. The suggestion will be offered to manufacturers that they emphasize their own product training courses and that they make use of N.E.W.A. Hiring Kits in their own organiaztions and to their distributors and through them to their dealers.

The chairman then announced the appointment of the following members of the committee to handle specific subjects at the meeting of this committee to be held during the convention.

Mr. Wear—Sales Training; Mr. Morton—Personnel Selection; Mr. Greene—Dealer Development; Mr. Beller—Repair Parts; and Mr. Wilson—Information Tags.

The chairman will also plan to conduct an open forum on "What Manufacturers' Plans Are in the Offing."

REPAIR SERVICES AND REPAIR PARTS

During general discussion of this subject, it was stated that this problem is not as serious with respect to small appliances as it is in the case of major appliances; also that many small appliances distributors contract to have repair work done outside. It was felt that the supply of repair parts will soon become more abundant.

It was recommended that all manufacturers who had not set up local service stations be urged to do so.

PLANS TO IMPROVE DISTRIBUTION OF SMALL APPLIANCES

In its consideration of this subject the Committee felt that the distributor's salesman must be the man who "knows the answers" and be accepted on that basis. He must help dealers more completely and more constructively than in the past.

Specifically, Mr. Greene emphasized that much better sales results could be obtained if dealers would keep complete records of names and addresses of customers and follow through to develop additional sales of other complementary products. Small appliances sold could be wrapped as gifts—with the possibility of having the purchaser decide to send the appliance to a friend as a gift, or keep it for some gift occasion, and buy a second one for his own use. In some instances it might be helpful to personalize appliances purchased by having them stamped with the buyer's initials. He also stressed the importance of having all employees of distributors and dealers use the various appliance in their own homes.

The Committee approved these suggestions and further advocated the wider use of both the Basis Sales Training and Hiring Programs, information tags and better facilities for the repair of small appliances.

COST STUDY

It was the consensus of those present that a study of the cost of handling small appliances at this time would not give a correct picture and that, in consequence, no request be made to have such a study undertaken by the Operating Cost Committee.

GO ALL-ELECTRIC PROGRAM

This industry program, developed by N.E.M.A. to combat LP (liquid petroleum) Gas (bottled gas) competition in the vast small town-rural market, was briefly outlined. The Committee believed that there was a definite place for small appliances in the program. It heartily endorsed the activity and was of the opinion that N.E.W.A. members would help in every way they could. Mr. Hill made reference to the series of information bulletins being issued by the Electric Range and Water Heater Sections of N.E.M.A. the first of which had been forwarded to members with a recent N.E.W.A. *Newsletter*. It is anticipated that other bulletins will be distributed with subsequent *Newsletters*.

"STORE DEMONSTRATIONS"

Pre-war the use of "store demonstrations" of small appliances had been subject to a number of abuses, but it was believed that there was some justification for "demonstrating" *new* products as they may be introduced in various markets. It was also felt that dealers could undertake demonstrations of small appliances on their own initiative on such occasions as church suppers, etc., and at their own stores.

MEETING WITH MANUFACTURERS

The chairman welcomed the representatives of manufacturing companies who joined the meeting for the afternoon session. He said the Committee felt the timing of this joint meeting was important in view of the fact that the supply of small appliances was beginning to meet the demand.

Information Tags. In his introduction of this subject, the chairman stated that the more information included on tags affixed to appliances the simpler the distributor's job would be. One company reported it is using a fact tag, with six salient points for each model. These points could be read by the sales clerk, or the prospective buyer. Another reported having a guarantee tag with specifications on the reverse side. The manufacturers present had no objection to the Committee's recommendation concerning the wider use of information tags and stressed the point that they were needed for consumer education.

Basic Sales Training and Hiring Programs. It was pointed out that manufacturers needed more information about these activities. At the request of the chairman, Mr. Hill outlined both programs in some detail. In answer to a specific request for resumes of the activities, including results obtained to date, for manufacturers' use with their field offices, Mr. Hill said this material had been provided.

Mr. Wear presented some detail bearing on two case histories of employees in his company who had taken the aptitude test. He emphasized the great value of such tests in revealing weaknesses and also in saving time in developing greater efficiency in present personnel. He said that most of their older employees had taken the aptitude test and that the hiring program had been found invaluable in picking the right man for the right job.

Repair Service. The problem of getting replacement parts is beginning to be solved. It is especially important at this time to keep appliances operating. One company reported that it made a general practice of having local authorized service stations — some of them factory-owned. Another has special distributors and dealers to handle service, and 16 factory-owned service stations. Still another has 100 authorized service stations at key points.

The entire question was viewed as one that is out of step with production at the present time. In some instances parts are bought from a service station (which does not merchandise). Such service stations are uniformly identified through advertisements in the yellow sections of the telephone book. It was pointed out that the Electrical Association of Philadelphia has a publication listing all service establishments for circulation to all dealers.

The Committee recommended that all electrical leagues be urged to undertake a similar program.

Plans to Improve Distribution of Small Appliances. It was the consensus of members present that the electrical distributor should be given a chance to sell to all outlets and that the Association wants electrical manufacturers to know that they can do the job.

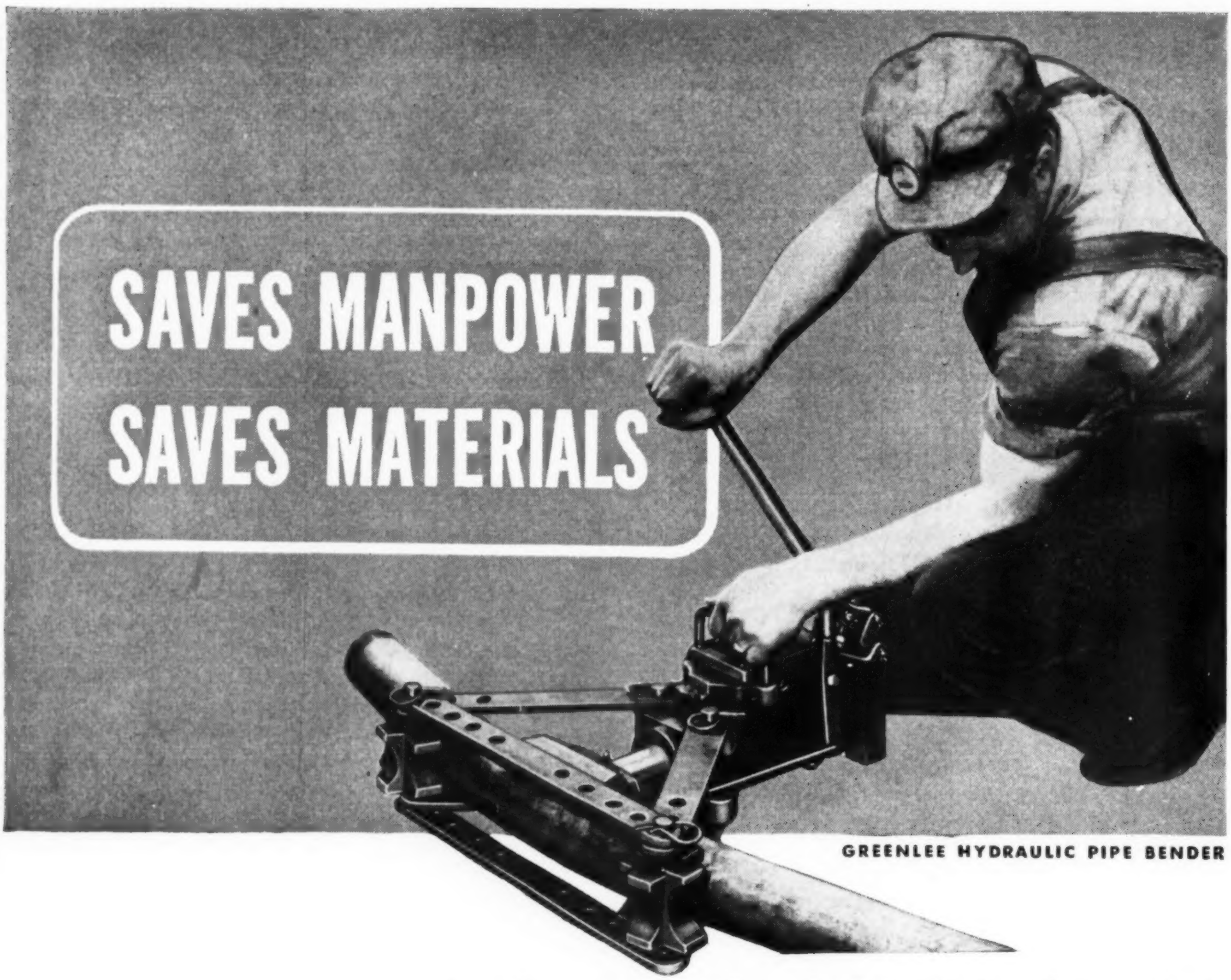
It was considered of primary importance, in view of the inventory situation, etc., to get the merchandise through to the consumer. Key accounts, therefore, are being allotted more products by manufacturers today. Products will be on allocation all of 1947, one company believed, but another said there might be some improvement in the second and third quarters in some specific appliances and not in others.

Mr. Byers raised the question of what percentage of small appliances business is confined to urban centers. He referred to Mr. Pyle's speeches on rural electrification in which the farm market was characterized as a 20 to 25 percent market. One manufacturer replied that their allotment basis takes care of the rural as well as the urban market.

Store Demonstrations. Manufacturers present agreed that store demonstrations should not be undertaken, but some were of the opinion that they might be useful in the case of some new products later on.

The chairman, on behalf of the committee, thanked the manufacturers who had come to the meeting for their cooperation and many constructive comments and suggestions. There being no further business to come before the meeting it stood adjourned at 4:30 P. M.

J. I. BOGDAN, ***Chairman***
Small Appliances Committee



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J. C. Dupont, Jr.

CHAIRMAN

Reports the

MEETING OF THE RESIDENTIAL LIGHTING FIXTURES COMMITTEE

National Electrical Wholesalers Association

The chairman opened the meeting at 10:30 a.m. expressing gratification at the representative attendance of committee members. He offered the opinion that the residential lighting fixtures business is generally a good business today. Deliveries being made by manufacturers not only are adequate, but in fact in some instances are even more than sufficient.

PACKAGING

The consensus of the committee was that there has been no improvement since the committee's last meeting, a year ago, so far as the packing and packaging of residential lighting fixtures may be concerned. This remains one of the industry's outstandingly acute problems. Manufacturers generally claim, and the committee felt with some justification, that they are still experiencing great difficulty in procuring packing materials. It was pointed out, however, that in the face of that condition some manufacturers manage to package their items very attractively and very efficiently as well. The situation generally, nevertheless, requires considerable improvement. It was believed by the committee, that damage to merchandise is frequently the result of rough handling in transit by shippers, rather than the fault of poor containers. The entire problem was one which the committee concluded required the constant attention of every individual wholesaler and that he necessarily must check with suppliers and shippers in order to minimize these faults.

WHOLESALERS' OPPORTUNITIES

An interesting discussion followed the committee's consideration of the Operating Cost Committee's report of their study on the Cost of Handling Residential Lighting Fixtures (for the month of July, 1946). Members present emphasized the profit possibilities as disclosed in that report. Residential lighting fixtures they concurred, were indicated to be probably the most profitable commodity line handled by electrical wholesalers, where special attention is devoted to the distribution of these lines.

In the opinion of the committee many more electrical wholesalers could handle residential lighting

PRESENT: Members of the Committee—

J. C. Dupont, Jr., Chairman, Lighting Fixture & Elect. Supply Co., Inc., New Orleans, La.
Frank Argast, Farrell-Argast Elec. Company, Indianapolis, Ind.
Max Blumberg, Madison Electric Co., Detroit, Mich.
E. Ernesty, State Electric Co., Pittsburgh, Pa.
L. H. Gross, Gross Electric Supply Company, Houston, Texas
Mr. Robison (for A. J. Musser), Dauphin Electrical Supplies Co., Harrisburg, Pa.
I. W. Sigal, Wally Electrical Supply Co., Pittsburgh, Pa.
C. D. Snyder, Wetherbee Electric Co., Oklahoma City, Okla.
George S. Steiner, Steiner Electric Co., Chicago, Ill.
C. E. Vail, United Electric Supply Company, St. Louis, Mo.

N.E.W.A. Staff—

Wm. M. Fenn, Esq., Counsel
Alfred Byers, Secretary
Robert C. Hill, Director of Appliance Division

fixtures than at present are engaged in such distribution. The electrical wholesaler, the committee believed, was particularly suited to the handling of this commodity. It was pointed out further, that manufacturers require a great many electrical wholesaling outlets in the marketing centers throughout the country. The committee urged that all members give serious consideration to the Operating Cost Committee's report as published for members, November 1, 1946, and to the idea of arranging for the distribution of residential lighting fixtures within the areas they serve. Electrical wholesalers, the committee agreed, could improve their financial position by the handling of residential lighting fixtures particularly if they would systematically engage in a specialty selling effort, which the profit on this commodity makes entirely feasible.

PERSONNEL SELECTION AND SALES TRAINING

Discussion by the committee indicated that the use of the Association's Basic Sales Training Program, and Scientific Personnel Selection Program is not universal among the membership. The adoption and use of these programs by Association members was said to be largely dependent upon the opinions of individual members as to the value of these programs to them under certain specific conditions. It was felt that the programs themselves each contained much of value, but that it would be necessary for the Association to continue calling attention to the materials being offered in order that members may have these programs in mind at such time as in their opinion they may be most adaptable and beneficial.

COMMITTEE'S CONVENTION PROGRAM

Plans for the Association's 38th Annual Convention, at Atlantic City, May 4-8, 1947, were discussed for the benefit of the committee. It was explained that the convention's Program Committee had arranged a joint report to the convention by this committee and the Industrial and Commercial Lighting Committee. The principal feature of that joint report, it was stated, would be the presentation of a skit to dramatize the opportunities ahead in the lighting field for electrical wholesalers. This presentation, to be sponsored jointly by both committees, is being arranged by W. W. Booth, chairman of the Industrial and Commercial Lighting Committee in cooperation with the chairman of this committee. The aid of the lighting merchandising specialists at Nela Park is being enlisted, and it was reported that an outstanding presentation of benefit to the entire membership is in prospect.

INDUSTRY CAMPAIGNS

E. Ernesty recommended that it would be helpful to the entire membership if headquarters would arrange to secure advance information regarding promotional campaign activities of various organized groups within the industry such as the American Home Lighting Institute, The Illuminating Engineering Society, Better Light Better Sight Bureau, Edison Electric Institute, etc. If this information were collected and distributed to N.E.W.A. membership from three to six months in advance of the inauguration of various sales or merchandising campaigns, members would thereby be helped considerably in laying out their buying and selling plans. This suggestion was favored by the committee.

COMMITTEE SESSION WITH INTERESTED MANUFACTURERS

Following a luncheon recess the committee reconvened with the following manufacturers present:

David Feiner, Efcolite Corporation, Trenton, N. J.; Mr. Mudic (for Isidor Rosenblatt), Globe Lighting Products, Inc., Brooklyn, N. Y.; Max D. Gruber, Gruber Brothers, Inc., New York, N. Y.; M. C. Held and Max Held, Halcolite Co., Inc., Brooklyn, N. Y.; Louis I. Stark, Markel Electric Products, Inc., Buffalo, N. Y.; and R. H. Bishop, Sylvania Electric Products, Inc., New York, N. Y.

After welcoming these manufacturers to the meeting, Chairman Dupont expressed keen regret at the inability of many more manufacturers to be present. Only about 20 percent of those to whom invitations were issued were attending this meeting. He stated that in view of the great importance of the residential lighting fixture field to the overall welfare of the electrical industry, a much better attendance of manufacturers was warranted. As a result, he said, it would not be possible to have the advantage which would have been possible if a much greater number of manufacturers were present and could participate in the discussions. The time of this meeting made the absence of manufacturers more understandable, and the chairman hoped that the next meeting could be so scheduled as to bring about a very large acceptance of the committee's invitations.

PACKAGING

The committee's discussion of packaging, as it occurred at the morning's session, was reviewed. The opinions of the manufacturer guests present were requested.

Summarized, these views were to the effect that a great deal of difficulty still exists in the procuring of sufficient packing materials and cartons. If manufacturers waited until a sufficient number of cartons was on hand for the packaging of each item, their shipments would be very severely curtailed. Instead they ship as frequently as possible under present distressing conditions. It was explained also that in one case a manufacturer had been requested by his regular carton suppliers to seek new sources inasmuch as the requirements could by no means be filled by his present supplier. Sooner or later conditions will improve, and when they do the manufacturers are looking forward to the complete solution of the present pressing package problem.

UNION LABELS

The manufacturers present were asked for their opinions as to the present situation regarding the use of union labels on their products. According to the discussion on this topic the union label problem is principally a local one. Manufacturers explained that although their products may be shipped with their own union labels, they have no control over the handling or installing of those products when they reach local markets.

CATALOGS

Manufacturers stated that plans are going forward for the publication of new catalogs by a number of manufacturers. It was reported that such catalogs will be available, in quantities, to distributors at a price merely to cover the cost of actual printing.

NEW FLUORESCENT PRODUCT DEVELOPMENTS

The committee inquired into the present production and distribution situation in the residential fluorescent lighting field, and as to whether or not any new developments or new products may be ready for reporting to the membership. In general it was the view that there were no new products to be reported in this field. Present commitments and present shortages of facilities had materially restricted these developments according to several views expressed.

One manufacturer present, however, referred to the development of a new pin-up style fluorescent lamp, and a new fluorescent lighting strip. These products, however, would be "package" rather than "style merchandise." In the case of the new fluorescent lighting strip, this would be particularly true, this manufacturer stated. The objective would be a product which will have a wide adaptation for home decorative purposes. Although these two new fluorescent lighting products are ready for production, sufficient manufacturing facilities are not yet available for production in quantities. This condition will more than likely exist for the balance of this year.

SALES TRAINING

The Association's Basic Sales Training Program was discussed. Manufacturers reported that conditions during the past few years have been such that manufacturers have not been too sales minded. That condition will, of course, be changed in the future and manufacturers will then necessarily consider much more active sales training plans and programs such as the program produced and sponsored jointly by E.E.I. and N.E.W.A.

PUBLIC EDUCATION

Discussion of the need for greater public education in the installation and use of good lighting, as considered at the last meeting of the committee, disclosed that it has not been possible to proceed in any degree with that effort because of general conditions in the manufacturing field. It was the opinion of all present that this need today is very great and that every effort should be made to formulate and carry through these educational plans at the earliest opportune moment.

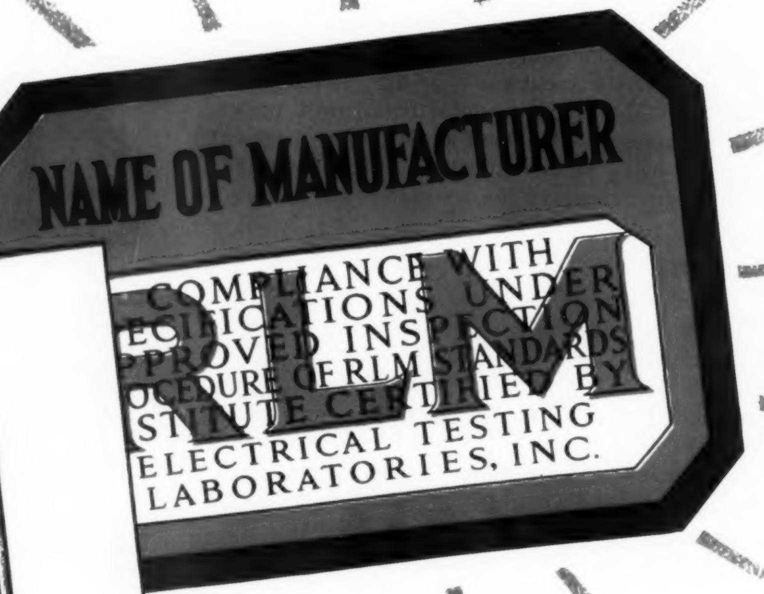
In this regard Mr. Bishop referred to the amount of valuable educational material which has been produced by lamp manufacturers. The Better Light, Better Sight Bureau, he said, has been assigned the task of releasing this type of promotional material for the entire lighting industry. The chairman explained that the Association's membership receives whatever material is released through the Better Light, Better Sight News. Mr. Bishop suggested that it would be very helpful to themselves and the industry at large, for all wholesalers to make the greatest use of all such material released in order to bring about greater public consciousness of the need for home lighting improvement.

In bringing the meeting to a close the chairman expressed the thanks of the committee for the cooperation of those manufacturers who were present and expressed the hope also that a great many manufacturers would arrange to attend the Association's convention at Atlantic City next May.

There being no further business to come before the meeting, it adjourned.

Respectfully submitted,

J. C. DUPONT, ***Chairman,***
Residential Lighting Fixtures Committee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No. 7 RLM—60" Fluorescent Two-Lamp Closed End Porcelain Enamel Unit
No. 9 RLM—48" Fluorescent Two-Lamp Open End Porcelain Enamel Unit
No. 10 RLM—48" Fluorescent Three-Lamp Open End Porcelain Enamel Unit
No. 11 RLM—60" Fluorescent Two-Lamp Open End Porcelain Enamel Unit
No. 18 RLM—Glassteel Diffusers
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Herbert Metz
CHAIRMAN

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FOURTEENTH PLANNING FORUM

National Electrical Wholesalers Association

In calling the meeting to order, the Chairman of the Planning Committee referred to the series of forum meetings that had been conducted by this committee during the past three years and expressed the appreciation of N.E.W.A. to the McGraw-Hill organization for their splendid cooperation on this occasion. The basic purpose of this meeting, he said, was to establish estimates of future business in a number of leading industries, including the electrical, and also to provide the basis for a forecast of national economic conditions. Each of the editors who had been invited to meet with the Planning Committee was asked to review the present situation in the industry or field served by his publication and comment on probable future trends. Their remarks, the Chairman said, would not be released in published form until each had approved the report of his own presentation.

Mr. Metz then introduced Mr. O. Fred. Rost, editor of *Electrical Wholesaling,* who had been asked to conduct the meeting on behalf of the McGraw-Hill Publishing Co. In his brief introduction of each editor, Mr. Rost indicated the industry, or subject, to be discussed and announced the objective of the meeting.

At the conclusion of the meeting, the Chairman, speaking for the Planning Committee and the Association, thanked all who had participated and especially Mr. Rost for his splendid work in organizing the forum program and his helpful guidance of the discussion.

Appended to and as a part of this report is a summary of the talk given by each editor.

Respectfully submitted,
HERBERT METZ, *Chairman,*
Planning Committee

SUMMARY OF REPORTS BY EDITORS

ELECTRONICS—Mr. Donald G. Fink

In this industry many important items are now in the engineering and pre-production stage.

Electronics may be classified under three general headings—Industrial, Communications and Entertainment. In the industrial category (controls, etc.) products moving into factories have broadest sales potentials through electrical contractors and plant managers rather than electrical wholesalers. The communications group includes telephone and telegraph, with many smaller systems finding increasing use by police and fire departments, bus companies, taxicabs (for dispatching) etc. Electrical wholesalers commonly handle most of these products.

The wholesalers' field is primarily in electronic products for entertainment—radio receivers, FM, television, combination sets, etc. There are more than 1,000 standard broadcast stations in operation. Investment in each averages $100,000, with higher amount to be credited on the good will side. Wholesalers, of course, do not handle the broadcast equipment but the sales potential for receivers and other home products is so great as to be fantastic.

FM stations now number 60, are small, of no great consequence yet. There are about 1 million FM receivers in use.

Radio receiver production is now at the rate of 1½ million per month. Short supply of wood is a deterring factor.

Generally speaking, FM is an adjunct to an expensive receiver. About 300 permits have been issued for new FM stations—and 400 more are on the list. (Operation is on the high band—88 to 108 megacycles.) Old FM sets can be converted. Receivers not yet under $55—and have increased 20 percent since controls were lifted. The problem is to get

PRESENT: Members of the Committee—
Herbert Metz, *Chairman*, Graybar Electric Co., Inc., New York, N. Y.
E. B. Ingraham, Times Appliance Co., Inc., New York, N. Y.
L. E. Latham, E. B. Latham & Co., New York, N. Y.
C. E. Mason, Novelty Electric Company, Philadelphia, Pa.
McGraw-Hill Editors:
Donald G. Fink—*Electronics.*
Sidney D. Kirkpatrick—*Chemical Engineering.*
Lewis K. Urquhart, Peter French—*Factory.*
Dexter Keezer—*Economist.*
Daniel T. Braymer—*Electrical World.*
Frank R. Innes—*Electrical World.*
Laurence Wray—*Electrical Merchandising.*
W. T. Stuart—*Electrical Contracting.*
O. Fred. Rost, Arthur Hooper—*Electrical Wholesaling.*
Ralph B. Smith, Clark R. Pace—*Business Week.*
Evan Just—*Engineering & Mining Journal.*
Burnham Finney—*American Machinist.*
Van Tuyl Boughton—*Engineering News-Record.*
C. W. Bendigo—*Textile World.*
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Robt. C. Hill, Director—Appliance Division.
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W. M. Fenn, Counsel.

programs for FM stations which now broadcast records, principally of symphonic music. Meanwhile this remains a luxury business.

The television industry is on the brink of becoming very big. The question of color versus black and white will be settled by the first of the year. Will be expensive but good—as good as 16 mm. movies in color. The sale of television receivers can proceed as soon as the color problem is settled (by the FCC.) A converter (about $25) will permit the use of a black and white receiver on any system in use (including color, when it comes) and viewers will see a black and white picture. Color television will be a luxury for a long time.

A top NBC official predicts that 1 million television sets will be sold in 1947 (cheapest being $160-170 plus installation fee). Some will be very expensive—to $2,600. Projection sets, with the picture about the size of a newspaper page (N. Y. Times opened) may sell for about $1,200.

The question of whether the public will buy at these prices depends largely on the kinds of programs offered. Sporting events are now being televised by the three stations in New York. With 5,000 television sets picking up the Louis-Conn fight, about 25 persons per set saw the program.

In the television field the receivers are good, production lines are running. Programs constitute the main problem.

Question: What about television versus radio in the home?

Answer: It is difficult to keep one's attention on the television picture for more than a few hours per day—but television has a tremendous advertising value.

CHEMICAL ENGINEERING—Mr. Sidney D. Kirkpatrick

There is now a boom in the construction of chemical plants that exceeds the war-time peak. Element of change (obsolescence) exceedingly important in this field.

CPA has approved 52,000 industrial building applications in 6 months to cost just under $2 billion. Some 3,600 applications were turned down. Of those approved about $200 million were in chemical and allied industries.

U. S. today has a world position in production of nitrogen fertilizers of which there is a 1 million ton shortage. Five of seven government owned ammonia plants that can make nitrogenous fertilizer have been sold or leased.

Many chemical plants are in, or are going to, natural gas areas—for production of plastics, resins, etc. Natural gas can also be converted into liquid fuels and other chemicals. A considerable migration of plants to the South-west and Far West is in prospect.

The following indicate estimates of demand and industry trends:

Rayon—enormous demand; chemicals consumption 10 percent larger in first quarter of 1947 than in like months of 1946; pulp and paper—improving; petroleum—up 15 percent in first quarter; glass—up; paint and varnish—about average; iron and steel—up very greatly (chemical consumption increased in this field principally because of use in alloy steels); rubber—an increasing percentage of natural rubber will go into tire production which will cut down on chemicals entering into synthetic rubber.

FACTORY—Messrs. Lewis K. Urquhart and Peter French

1. Outlook for early 1947.

With controls off, impetus has been given to production. Pent-up demand for manufactured goods still exist. If labor doesn't upset the applecart, factories can operate at volumes big enough to permit reasonable profits—even under today's high-cost conditions.

There are adverse factors, however. Shortages of materials and parts are holding back production. Unbalanced inventories continue to exist. Lack of equipment is still a retarding influence,—some equipment on order for two years still has not been delivered.

Worst of all, productivity is well off from the 1941 peak. The longtime upward trend—an average of 3 percent a year—is now in reverse. Latest BLS figures shows we are right back where we were in 1940.

At any rate, labor cost is up—and unit cost along with it. This can be offset only by greater efficiency in plant operation and methods. Industry's biggest problem today is to increase output per manhour.

2. Management's probable course in 1947.

Management will continue to recognize the right to bargain collectively. But it will probably oppose the closed shop, check-off, maintenance of membership and foremen's unions.

Management will undoubtedly seek revision of the Wagner Act.

Above all, it will try to attain high levels of production and production economies that will make high real wages possible, permit reasonable returns for management and stockholders, and make more and more goods available at prices more and more people can afford to pay.

3. How workers stand.

What the factory worker really thinks about the cost of living, wages and strikes was the subject of a *Factory* survey (September 1946) and is summarized as follows in the October and November issues:

(a.) The worker says the cost of living has gone up 20 to 30 percent since the end of the war.

(b.) He blames shortages, high wages, and high prices, and the OPA.

(c.) He blames shortages on people holding back for higher prices.

(d.) He thinks low production is caused by shortages of materials and strikes.

(e.) He believes workers can help to stop inflation by helping to increase production and by not striking . . . and he thinks getting to work and increasing production will do the most to bring prices down again.

(f.) The worker thinks industry can grant wage increases now without raising prices . . . he thinks a 10 percent wage increase is possible . . . he is sure his own company can afford wage increases.

(g.) He believes workers will strike if industry does not give an increase . . . but he is not so sure that he would strike . . . non-union, older and Southern workers and independent union members are less inclined to strike.

(h.) He thinks there are more strikes, not fewer, ahead . . . but he's not as certain of it as he was a year ago . . . and the cost of living will be the chief cause of strikes.

(i.) If he has taken part in a strike since the end of the war, he is of two minds as to whether it was worth the sacrifice . . . but he doesn't believe that he could have gotten the same benefits without striking.

4. Conclusion.

On the whole, the outlook of the manufacturing industries appears to be good—with a production potential bigger than it has ever had in any peacetime year. But there is also a big strike potential which could conceivably set us back on our heels. We are moving today from a controlled economy into a free one. It's a painful process. But the sooner we do it, the better.

Question: Why has management failed to do a sales job in the labor relations fields?

Answer: There is no excuse for the poor job management has done. Certain companies have pointed the way. The techniques are simple enough. They have been widely reported. Any company can use them. Basically, most managements have been afraid to "talk back to labor." In general, management today understands the problem, recognizes the need to pass on company information and policies to workers. It can well afford to pattern some of its efforts on the very excellent jobs some of the labor unions have done. However, whereas the unions have sometimes found it necessary to distort the facts, management must be scrupulous in presenting nothing but the truth.

Question: Are there any plans for improved lighting?

Answer: Management generally is sold on the need for good lighting.

MR. DEXTER KEEZER—Economist

(In his brief introduction of Mr. Keezer, Mr. Rost emphasized the importance of electrical wholesaling to all industry, to the public and our entire economy.)

The electrical industry has a major stake in housing. More than 600,000 are employed on site building construction. The building program might go bust rather badly which would create a serious situation. A basic trouble is political. More construction has been started than finished (the latter doubled) with increased costs.

It is recommended that fewer projects be started. The entire picture is very complicated. The problem is still the ability to finish individual jobs—with materials prices rising and some unobtainable. Some buyers will not go along with the increasing costs. The program must be cut back to the point where there is no devastating competition for materials.

How this national situation develops is of major importance to all of us. Five million home units are needed but resistance to high prices is increasing.

The building materials producers can make the difference between a serious let-down in general business next year, or a slight one, or none.

A slump is a drop of one-third in industrial production—decreasing for about 18 months and back up again in a comparable period (i.e. 1921, and 1937-38).

A bump is a 20 percent drop, or less, with the down and up cycle taking less than a year.

The odds are that we will have a bump. With enough bad luck we could have a slump but that does not seem likely. And there may even be no appreciable let-up in general business.

The election provided a favorable factor. The stored up demand for durable goods has not even been dented. Housing can be the leader in a continuing prosperity if we get over the hurdle of the lifting of price controls. The entire set of forces in the national economy could go well—or sour. However, nobody is thinking in terms of a depression, if only for the reason that vast demands are waiting to be filled.

Question: Are we pricing ourselves out of export markets?

Answer: There have been large foreign loans, but foreign producers are not in shape to compete now. There will be a study of this problem later. However, for months the situation will be buoyant.

Question: With basic commodity prices up, such as copper, how can the line on prices be held in the building field?

Answer: Much depends on the attitude of the 80th Congress. In some cases profits after taxes are high, but electrical companies have been having a thin time of it.

Question: How about price trends in general?

Answer: There will be some demand for another wage increase. In the automobile industry (1,000,000 workers) wage rates have been behind cost of living since 1939. In other fields wages are way up. Some restraint and judgment on the part of labor leaders will be needed. Farm prices are starting down which may lower the cost of living. (Some restraint is coming into the picture.) If wages and prices go up in 1947 business can be good but will be building up to a later smash.

Question: Wouldn't that result in the elimination of some non-essential industries?

Answer: At the worst there might be a substantial let down next year; at the best, none. There will be no major depression.

Generally speaking, inventories are not high in relation to business volume. They have gone up rapidly and might also go down fast if producers can get certain things they need.

ELECTRICAL WORLD—Messrs. Frank R. Innes and Daniel T. Braymer
ELECTRICAL MERCHANDISING—Mr. Laurence Wray
ELECTRICAL CONTRACTING—Mr. W. T. Stuart
ELECTRICAL WHOLESALING—Messrs. O. Fred. Rost and Arthur Hooper

The outlook for the electrical industry in 1947 is good. We must have increased production and more efficient functioning throughout all branches of the industry. Power systems will be severely strained to meet coming demands.

Now that electrical appliances are beginning to be manufactured in volume, there can be no question that we will have to do an all-out selling job.

Question: How can we help our dealers to do an outstanding competitive job? We want to give them all available information that would be helpful (i.e.—our hiring program, the Basic Sales Training Program, etc.) and we would like to know how to get it to them and how to help them put it into operation.

Answer: There is no pat answer to that question. The one way that seems to work is to employ new approaches and new forms and plenty of repetition.

One phase of this problem is squarely up to the management of electrical wholesalers. It is their responsibility to get their salesmen to sell ideas, to assist dealers in every possible way and to see that the material is put to work. There should be a man who provides service to dealers—and who does not take orders.

The point was made that the fact dealers are not using sales helps today should not be disturbing. However, they are interested, and, it was stated, they will be "beating on your door later on."

Meanwhile dealers should be told now why they need sales helps and what benefits they could derive from them. Dealers are now trying to get merchandise. The group assisting dealers should be augmented. It is important to remember that all dealers do not need the same kind of help. In many instances the idea of an Association booklet to do the job would prove useless. Electrical manufacturers have published elaborate sales plans and we know that they are often not used.

The chain store people have neglected sales promotion during this "boom" period. They are now calling regional meetings in an attempt to strengthen their retail outlets' position in the coming market but the store people still are asking "why do we need to do this now?" Our solution for the problem is to get our salesmen and others to promote through actual contact.

Electric utilities cannot get enough equipment to carry comfortably the loads being put on them. December, 1946, will probably bring a record peak load. There are large plans for expansion but they will necessarily be slowed by conditions. During the war the average power reserve was under 20 percent. In 1946, only around 700,000 kw. of new capacity will have actually been installed, equal to about one-half of what was planned. There may not even be enough new capacity to replace the old that is being dropped out. As of the first of October, available figures show a net increase of only about 5,000 kw. for the whole country.

Although it was expected industrial use of electricity could drop sharply following the end of the war, it has only gone down 10 to 20 percent. During 1946 the utility industry planned to lay out $900 million for new construction; however, only about one-third to one-half of that amount will be used, due largely to the fact that equipment has not been delivered.

Question: What is the labor situation in the utility field?

Answer: There will probably be some restrictions placed on strikes in order to prevent the shutting down of cities and areas.

The domestic usage of electricity continues at a very high rate. In August (1946) the average was 1300 kwhrs. per residential customer. Despite their inability to get appliances, people are using more electricity in their homes. They are using the applainces they have more freely.

Question: Will increased sales resistance in 1947 speed up the production of new appliances, new models and new designs?

Answer: That is almost here now in the radio business. There will probably be some new models of appliances after the first of the year.

One Chicago department store sold only five vacuum cleaners in one week. A survey showed that customers were waiting for something that *looked* new.

Some electrical manufacturers who were asked to send in material for a trade paper's new products catalog section asked when the issue (December) would be distributed. They indicated they did not want their listings to appear before Jan. 1st.

Trade-ins are less than 2 percent of sales today. Before the war they were 40 percent. The dealer is against trade-ins, but he will have to be in that business again, and profitably, when volume selling begins. Trade-ins may subsequently reach 70 percent. That, however, is still ahead of us and is not a problem now.

Question: How far will dealers go in providing service?

Answer: Distributors service all major appliances in metropolitan areas. Dealers handle the small appliances. Some manufacturers have their own set-up.

BUSINESS WEEK—Messrs. Ralph B. Smith and Clark R. Pace

When is the bump coming? A recession is coming and it will hit the hardest in lines like textiles where production is about meeting demand. National income might fall off 15 percent. Textiles might go down 30 percent or even 50 percent.

A decline in employment is difficult to predict. Many producers are hoarding personnel.

There is some cutting back now on items high in inventory and this may be the beginning of the recession. Christmas business will be good, but if it is not as high as expected, there will be a flood of order cancellations in January.

A recession would have some good features. It would loosen the labor market and reduce prices. It may come more quickly than most observers predict and, if so, be over quickly. However, if there is another round of wage increases the recession would be more severe. Lines approaching balance now will be in over-supply. The danger may lie in employers too willingly granting wage increases to get production and sales.

Question: Would a personal income tax cut lessen labor's demands?

Answers: Probably not.

Question: What if building materials prices rise 35 to 50 percent?

Answer: Employment in the construction industry is starting down slightly. The general rate of gain in capital expansion is tapering off and is below what economists think we need to have at the present levels of business and our national economy. Manufacturers began to think seriously of inventories when the September market break occurred. But the cushions of vast savings and demand are here.

Question: Will we have to watch inventory replacements carefully?

Answer: We are probably a long way from the saturation point in many items. However, we must be very careful whenever we get close to demand.

On the question of the possibility of another wave of strikes, some manufacturers are going to give a little to get production.

ENGINEERING & MINING JOURNAL—Mr. Evan Just

The great wartime surpluses of metals have been pretty well used up by the tremendous demands from consumers. However, stockpiles of copper are fair, and of zinc good. Imports are now needed for copper, lead and zinc. (Government controls apply to imports, but may not after Jan. 1, NOTE: Removed, except for tin, since the discussion.) As long as there is general prosperity high level of metal consumption will continue.

Construction has been subnormal for 15 years. If building goes ahead the requirements for metals will be large. On the other hand, metals usually suffer excessively in a depression.

Prices for copper, lead and zinc have gone up since decontrol. The outlook is for prices to move toward the present international level, plus duty. Copper, now at 17½ cents, may go to 21 or 22 cents a pound.

The copper and zinc producers are worried by the competition from light metals. A falling in demand will mean lower prices. In the metals field present prices are based largely on wage increases. Labor will probably move in and take the lion's share of revenue from higher prices. This has happened during the war in South America and Africa.

Copper is now being produced at capacity, except for labor shortages that should be corrected by Jan. 1.

On the basis of a national budget of $30 billion, the tax burden would be crushing if we had less than $150 billion gross output. If less, the government will probably have to attempt inflationary measures. Believes, therefore, that the present wage levels will be kept up.

It is not possible to build up a backlog of copper at the present level of consumption—about 1¼ million tons a year. The present 1 million output of domestic mines is above their proper capacity (¾ million) and ¼ million tons is likely to come from abroad.

Question: Why do our copper producers raise prices to meet import levels if they sincerely want to hold prices down?

Answer: That seems to be the way a free market works.

Under the Premium Price Plan a subsidy on copper, lead and zinc is in effect until June, 1947. Its basic purpose is to bring high cost production into the market. (This, now, is superimposed on a more or less free market.) Apart from subsidies, prices are determined largely by the high cost producer in the field.

Consumption of aluminum has gone up extensively—to 120 million pounds a month, which is four times the highest prewar level.

AMERICAN MACHINIST—Mr. Burnham Finney

A 45 percent increase in the metalworking field by next March (over June, 1946) has been forecast by CPA—and the 1946 level was high. The supply of steel and castings used in the capital goods industries is a limiting factor. One reason why the outlook appears brighter for '47 than the actual accomplishments this year is that shortages which have plagued almost all companies to date are expected to ease as the new year wears on.

In its best pre-war year, the machine tool industry's volume was $185 million, $1.3 billion during the war (1942), and slightly more than $300 million in 1946. The 1947 figure should be a minimum of $250 million, with a good possibility of reaching $300 million.

The automobile industry, which had too ambitious a program, has been disappointing in 1946. Expected to turn out 6 million cars and trucks in 1947 but now plans on 4 million cars, 1 million trucks. That would still be a good year and represent boom times.

In agricultural implements the volume in 1947 will exceed $1,000,000,000 for the first time in a peacetime year. In fact, an all-time high mark is likely to be established. Despite losses the past year attributable to strikes, the industry produced almost $700 million of farm implements. Other metalworking industries, such as railroad equipment builders, construction machinery companies and refrigerator makers, are expected to do just as well proportionately as farm implement manufacturers.

Materials and parts shortages, particularly of electrical equipment, have created the bottleneck in machine tool production. It is not expected that this situation will improve until well into 1947. Many companies are redesigning machines or adding new ones. The machine tool builders will benefit because of management's increasing effort to lower production costs through the use of new machines yielding greater output and higher accuracy.

Another important trend in the metalworking industry is decentralization and particularly in the electrical equipment field. Still another trend is the better handling of materials within metalworking shops. Machinery methods have been speeded up greatly and handling time minimized.

Today the metalworking industries possess more over-age machine tools than at any time in 20 years—despite the fact that the machine tool industry turned out more units in the last five years than the previous forty. More than 600,000 machine tools in this country are over 15 years old. Almost all of the obsolete, high-cost machinery is in the hands of private industry, and not the government. America's metalworking shops now have 293,000 machine tools that are 16 to 20 years old and 61,000 over 25 years of age. Few machine tools were scrapped during the war period. This situation indicates that replacements of old machine tools is intensified and should be above normal during the 5 year period from 1945 to 1949.

Part of the demand for machine tools comes from foreign markets. Pre-war one-fifth of the business was done abroad, and 25 to 30 percent is likely in 1947. This is an important factor in the machine tool field.

The biggest backlogs of demand come from the textile, canning and packaging machinery industries. Similarly there is great demand from the plastics industry, (for injection molding machines) and from printing, paper and all heavy lines industries (i.e.—for big stamping presses, etc.) At present there is no sign of lessened demand during 1947.

A great deal will depend on price increases.

ENGINEERING NEWS-RECORD—Mr. Van Tuyl Boughton

The outlook for construction is good. For 1946 the total will probably be $11 billion. In 1945 it was $3.8 billion, and $8.5 billion in 1940. These estimates are on the basis of contracts awarded as reported by ENR. Our figures do not include small work like residential and farm building or general construction below certain measurements. In 1947 the total should reach $12 billion. The record so far was in 1942—$12.8 billion.

We are at the point now of utilizing the total capacity for this purpose of the lumber, steel, etc., industries.

The following is a break down of contracts awarded for 1946, and similar estimates for 1947.**

Heavy Construction as Reported by ENR (in millions of dollars)

	1946 (as now estimated)	1947 (estimated)	Percent Change 1946-1947
Public Bldgs.	420	500	+ 19
Industrial Bldgs.	1,170*	1,400	+ 20
Commercial Bldgs. (inc. Mass Housing	1,885*		
Highways and Street	820*	980	+ 20
Earthwork and Drainage	340*	340	0
Bridges	140	160	+ 14
Sewerage	120	140	+ 17
Waterworks	120	140	+ 17
Unclassified	360	430	+ 19
ENR Engineering Construction	5,375	6,540	+ 22
Estimated Total Construction	10,750	12,000	

*All-time high records.

Previous all-time high record of total construction, 1942, 12.8 billion.

Records for other years, 1945, 3.8 billion; 1940, 8.5 billion.

"Unclassified" includes airports, railroads, recreation facilities, power dams.

"Earthwork & Drainage" includes irrigation canals and dams and flood-control work.

ENR Minimums are: Water Supply, Sewerage, etc., $22,500; other public work, $40,000; Industrial Bldgs., $55,000; Other bldgs., $200,000.

**A factor has been added to these classifications to cover contracts not reported. The 1946 total will be approximately $11 billion and the estimated total for 1947 will be about $12 billion.

The cost of construction is now flattening off, indicating that we may have reached the peak figure, but it might go 10 percent higher. Costs that were due to delays are being reduced and may be largely eliminated in 1947. We may then be able to absorb some of the labor cost increases, etc. The question of timing in construction is being carefully studied.

Question: Can we speed up residential building by eliminating restrictions on apprentices?

Answer: That is an important factor now, but not as much is being done in that direction as might be. The Department of Labor is setting up apprentice training programs.

Question: What about the restrictions on prefabricated houses?

Answer: There will probably not be much improvement in 1947.

Question: What effect will short supply of essential materials have?

Answer: The lumber people are optimistic, but we are not too optimistic.

We believe that with the change in government next year there will be some change in the Veterans' housing program and easing of restrictions on other types of construction.

The present large-scale building plans in New York City are duplicated on a smaller scale in other cities—i.e.—Pittsburgh.

The outlook is generally optimistic. We have a backlog requiring 5 or 6 years of full production. Highway construction will be as large as it has been granted record amounts of Federal aid for the first three post-war years. The lighting of highways will require 1 million new fixtures in 10 years, and 600,000 luminaires. Another important field is airport construction and here, too, lighting will play an important part.

(NOTE: Mr. Boughton returned to the meeting to report that a new estimate had just been received from the Building Products Institute. It indicated that 1,200,000 homes and non-residential construction projects would be started in 1947 if strikes do not prevent. But, the report stated, controls must be removed. Total 1947 construction was estimated by the Institute at $20 billion, of which $8.5 billion would be non-residential of the latter figure, $3.5 billion would be for public works and $6 billion of the grand total for repair and maintenance.)

TEXTILE WORLD—Mr. C. W. Bendigo

With the exception of nylon and tire-cord rayon, the textile industry could not expand during the war; however, this year the production from the industry will be 50 percent above prewar. Cotton consumption is up 36.8 percent, rayon production 136.3 percent and wool consumption for apparel 133.7 percent over 1939, which is considered a normal prewar year. Cotton is now leveling off, and some wool items are in over-supply.

Production—900 million pounds of synthetics in 1946 and 1,250 million pounds in 1947 (reaching over 25 percent of normal cotton consumption).

Value of construction of new plants and for replacements announced in 1946 totaled $298 million (estimated), of which the largest unit was for synthetics. In the full-fashioned knitting field about 76 percent (75.8) of equipment is considered obsolescent. New equipment cannot be obtained in the amounts demanded, and many delivery dates are being quoted for 1950 and later.

For the first time since about 1926 textile mills have plenty of money to spend. Their profits are high in 1946, in spite of wages being up over 125 percent. (This refers to textile, not garment, figures.) Rayon is now the cheapest of the major staple fibers. (Later note, with end of OPA, prices went up but still, waste considered, rayon is cheapest.)

The trend continues toward motorizing of equipment to replace line drives—but it is difficult to get motors.

Plants are all interested in improving their lighting and many are considering some kind of air conditioning. The latter is very important because of the absolute need for uniform control of the raw product in the processing of synthetics. The new processing methods call for closer tolerances than ever before.

There is a broad market for spun glass filaments in industrial uses, including its use as a base for laminates. It can be employed as a base for coated fabrics but will not withstand a great deal of flexing.

Our industry's vertical set-up, among other things, has given us an advantage over the British.

Today we could use four times as much of synthetic textiles as is being produced. Nylon production went up four times during the war, and it is expected that the supply in 1947 will be sufficient to satisfy the demand for hosiery.

The order of importance in synthetics is viscose, acetate, and nylon. Natural silk will probably return to about 15 percent of its prewar volume.

ELECTRICAL WHOLESALING—Mr. O. Fred. Rost

In presenting a forecast of the national economic picture with special reference to the electrical wholesaler, Mr. Rost referred to the title of an *Electrical Wholesaling* editorial: "Exit OPA Control—Enter Self Control."

Manufacturers and wholesalers should try to "hold the line." By doing so we will save ourselves a great many headaches after the peak is reached. The same applies to the inventory situation. Wholesalers cannot afford to speculate in the materials market. We must tighten our belts while demands are being met. Try to work toward having supply equal outgo, without heavy accumulation. The electrical industry may reach a recession point about the middle of next year, and some branches of it earlier.

However, the year 1947 should represent a record-breaking year for total volume, partly because of price increases.

The depth of the recession will be determined by the height to which wholesale prices are pushed. Much will depend on whether we have extended strikes in basic industries.

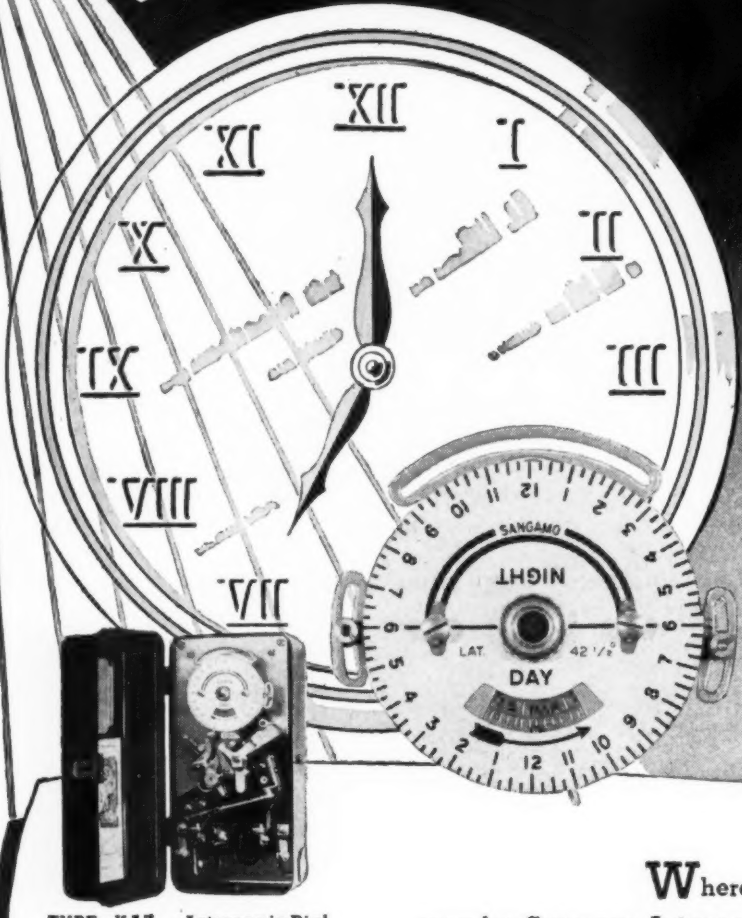
The coming 1947 volume might be duplicated in 1948 and 1949. We may enter upon a "plateau" of volume that may be sustained for a period of three or four years.

The boom volume indicated in the appliance field will probably never be reached because the public is now in a more sober mood and the spending spree will not become fact. This is a good influence.

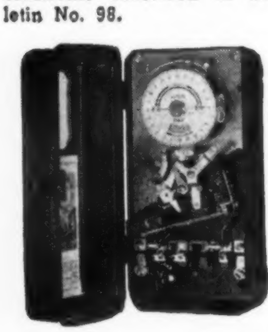
Question: Will there be any change in manufacturers' policy of selling to distributors?

Answer: No—not in the electrical field. Electrical wholesalers are more firmly established today than they ever have been.

Just what time is it at dusk and dawn



TYPE KAZ. Astronomic-Dial Equipped, this type is available in wide variety of combinations, described in Bulletin No. 98.



TYPE VSWZ. In addition to its Astronomic Dial, this switch is equipped with the automatic "carryover", providing continuous operation during current interruptions.

Wherever your lighting installation may be, Sangamo Astronomic Dial Time-Switches operate automatically at "Dusk" and "Dawn", adjusting to the daily changes in length of daylight. This fully automatic operation eliminates periodic re-setting of the dial required with conventional switches. For fully automatic control of "Dusk" and "Dawn" lighting installations, specify Sangamo Astronomic Dial Time-Switches. Although production of Sangamo Time-Switches is now at a much higher than pre-war rate, a large backlog of orders suggests early placement of your order for future delivery.

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L. W. Taylor

CHAIRMAN

Presents the

REPORT OF THE OUTSIDE CONSTRUCTION MATERIALS COMMITTEE

National Electrical Wholesalers Association

At the opening of the meeting, Chairman Taylor called on Managing Director Pyle who explained the methods of conducting committee meetings and preparing and publishing reports. He commented also on the fact that this was the first time in almost three years that this committee had held a meeting.

Mr. Taylor expressed regret that a full attendance had not been possible. He said, however, that in view of the relative nearness of the annual Convention, it seemed practical to hold a meeting in order to explore the present situation in this field and issue a report to the membership. Although the agenda was a brief one, he felt that each subject was important to all distributors of this material and that helpful information could be collected and reported as a result of a discussion at this time.

PACKAGING OF HARDWARE ITEMS

The Chairman stated that this subject is under study by a committee of the Edison Electric Institute. That committee is scheduled to meet in two or three weeks and already, he said, they have made some progress in their studies to improve packaging. Mr. Taylor reported that, to his knowledge, at least one manufacturer is devoting considerable thought to the improvement of his own packaging and is giving much attention to the factor of weight and necessity for sturdy containers to withstand necessary handling by shippers' and distributors' warehousemen. In that one instance the use of corrugated containers is being studied, as well as the limitation of 100 pounds per container.

WAREHOUSE COMMITTEE ASKED TO STUDY PACKAGING OF RACKS AND INSULATORS

Possibilities for some practical changes in packaging secondary racks and insulators were discussed at some length. Emphasis was put upon the need for packaging insulators in multiples to correspond with

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PRESENT: Members of the Committee—
L. W. Taylor, Chairman, Graybar Electric Company, Inc., New York, N. Y.
W. H. Butt, Butt's Electrical Supply Company, Charleston, S. C.
H. Czech, Westinghouse Electric Supply Company, Chicago, Illinois.

N.E.W.A. Staff—
Chas. G. Pyle, Managing Director
Alfred Byers, Secretary
(Note: Mr. F. S. Johnson, who planned to be present, was unable to procure transportation from Milwaukee, due to a severe blizzard.)

the packaging of these racks by types and quantities. It is mentioned, as an example that secondary racks are packed in bundles of 5, while the porcelain spools used with them are shipped in cartons of 50. Consequently, in the case of three wire racks it is necessary to order them in multiples of 50 in order to make the quantity of spools and racks coincide. This problem might be simplified by putting the spools in individual cartons of 15 each.

Other practical changes were also believed to be possible in the cases of other hardware items. As a means of arriving at some concrete solution the members voted to request that the Warehousing Committee undertake a study of the packaging of Pole Line Hardware items in order to make such recommendations to the Outside Construction Materials Committee toward improvement as in their judgment appear to be most beneficial to all concerned.

INFORMATION TAGS FOR STEEL WIRE AND STRAND

Causes for present delays in more promptly filling orders for steel wire and strand out of wholesalers' warehouses were discussed. It was the consensus of those present that if informative, simple tags were attached to these items by the manufacturer, the most serious cause for this delay would be removed. The principal information such tags should contain should be the weight and footage of each coil or reel so tagged.

In the particular case of steel, bare copper, and weatherproof wires, the committee recommended that tags of various colors be used to differentiate temper, (medium, soft-drawn, hard-drawn.)

TELEPHONE DROP WIRE

Also considered was the complaint, now current, from telephone companies that they experience too much wastage due to the wide variation of coil lengths with a high percentage of extra short coils. The members present felt that if coils were not less than 500 feet they would be much better adapted to the users needs and present causes for complaint would be largely eliminated.

OPERATING COST STUDY

Operating conditions and expenses in the handling of outside construction materials by electrical wholesalers have undergone substantial changes in recent years. The Committee held the view that some dependable data in this field would be most helpful to members as an aid in their making their own individual comparisons with such industry averages of past performances as might be practicable to obtain. Accordingly, it was voted that the Operating Cost Committee be requested to conduct a study among the Association's membership in the Apparatus and Supplies Division and publish the results at the earliest convenient date.

PRICE INFORMATION SHEETS

Discussion of the methods now being followed by manufacturers in publishing their individual price information sheets disclosed that it is the experience of the members present that their own manufacturing suppliers are publishing new sheets promptly when price changes in their own products occur. Such sheets also were said to be published now in such manner as to reduce the expense of computation and clerical work for wholesalers in preparing estimates. The Committee felt that material progress had been made by manufacturers in their efforts to help wholesalers with this important problem.

There being no further business to come before the Committee, the meeting was adjourned.

L. W. TAYLOR, *Chairman*
Outside Construction Materials Committee

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Maurice S. Despres

CHAIRMAN

Presents the

SUPPLEMENTAL REPORT OF THE RADIO, TELEVISION & TUBES COMMITTEE

National Electrical Wholesalers Association

SUBJECT: Facilities and Equipment required by distributors and retailers for servicing of broadcast, FM and Television Receivers.

The chairman wishes to extend the thanks of the Committee and its appreciation to Mr. Henry C. Johnson of Sylvania Electric Products, Inc., for his valuable assistance extended in the preparation of this report. Much of the material contained herein was made available through the cooperation of Mr. Johnson.

1. Purpose of this Report

The material contained herein is offered as an overall pattern that will provide ideas and suggestions for the modernization, improvement and the proper equipping of distributors and retailers' radio service departments.

2. Service Department Requirements

(a) *Analysis Section*—This section is required for the purpose of analyzing receiver tubes. It should contain an analysis bench, preferably with built-in book shelves above, and file cabinets and storage cabinets on either side. A suggested diagram for this section, marked "Diagram A" is contained in this report. A suggested diagram for an analysis bench is also included.

A bakelite control panel should be provided to include outlets for 110 volt a-c, 6 volts d-c for auto receivers, 500 volts d-c, an auto transformer, and switches for the instruments in the test panel. Antenna and ground outlets should also be included and should be mounted on either end of the abovementioned bakelite panel.

On either side of the control panel, it is desirable to provide drawers for holding the various connecting cables of the test sets. A shelf or wallboard should be provided on which charts and operating instructions for the test equipment may be fastened. If possible, it would be desirable to build closed cupboards on each side of the analysis bench, or adjacent to it, to provide storage space for parts.

(b) *Repair Section*—The repair section is used for the general repair of receivers. The bench should be of standard size and height, with plenty of drawer space for tools and small equipment. In the back center of the work bench, a series of small meters should be mounted which can be used for reading currents, voltages and for continuity work. Some servicemen consider such meters of little value, but with a set of adapters this equipment will be found quite useful. Fastened to or adjacent to this bench, provision should be made for ground and antenna connections.

In the repair section, a screened noise cage should be built, 7 feet in height, to be used for oscillograph work and similar operations. The exterior and interior of this cage, including the ceiling and floor, should be covered with ¼ inch mesh galvanized screening applied over a frame-work of 2 x 4 inch lumber. The inner screen should be directly connected to ground, while the outer should be connected to an electro static shield included in a one-to-one ratio transformer connected in the a-c circuit of the cage. This arrangement will provide a workroom free of electrical interference. A less expensive type of filtering may prove satisfactory in localities where the interference is not so great a problem as will be found in factory or industrial areas.

SERVICE SHOP EQUIPMENT

Listed below are the important instruments, tools and equipment that every well-equipped radio service shop should have for servicing and repairing radios. It is not possible, in all shops, to have all the items and choice is left to the individual as to the type of instruments and tools he desires for his particular methods of working.

Test Instruments

Tube tester
Set Analyzer
Signal Generator
Condenser Analyzer
Universal Speaker
Small Oscillograph
FM Signal Generator
Assortment of Meters for Continuity Set
Audio Frequency Oscillator
Vibrator Tester
Watt Meter
Oscillograph
Output Meter
Voltometer

Tools

Long Nose Pliers
Thin Nose Pliers
Diagonal Cutters
End Cutters
Wire Stripper
Flat Wrenches, ¼ to ⅝
Socket Wrenches
Screw Drivers (various sizes)
Patented Screw Holding Screw Driver
Offset Screw Driver
Drill Press
Hand Drill
Assortment of Drills
Soldering Irons (100 watt, 200 watt)
Assortment of Files
Assortment of Cold Chisels
Hack Saw
Large and Small Vises
Hammers
Motor Driven Grinding Wheel
Tap Wrench
Taps for above (4-36, 6-32, 8-32, 10-32)
Circular Cutter
Tin Snips
Set of Neutralizing Tools
Scratch-awl
Center Punches
Tuning Wand

Equipment

Service Kit
Service Manuals
Reference Books
Turn Table and Pickup
Extra Power Supply
A Battery Eliminator or A Battery
Portable P. A. System
Resistance Indicator
Condenser Box
Color Code Indicator
Auto Cable Repair Unit
Flash Light
Head Phones
Extension Cord
Speaker Shims
Hand Electric Cleaner
Dusting Brushes
Polishing Kit
Set of Adapters
Parts Cabinet with Parts

For Servicing FM and Television Receivers

1. Sweep Signal Generator tunable over the range of at least 5 to 50 Mc with sweep adjustable from 0 to 15 Mc.

2. Ordinary 3" or 5" oscilloscope for visual alignment with the sweep generator.

3. Signal Generator tunable from 40 to 216 Mc.

4. Modern high impedence vacuum tube meter to measure ohms, d-c volts and a-c volts accurately to a frequency of 250 Mc.

5. DC Voltmeters capable of measuring 15,000 volts for direct viewing tubes, and 30,000 volts for projection tubes. Current drain less than 50 u.a. CAUTION—Extreme care should be used in handling this equipment. Although the current may be very low in the high voltage power supply, we are

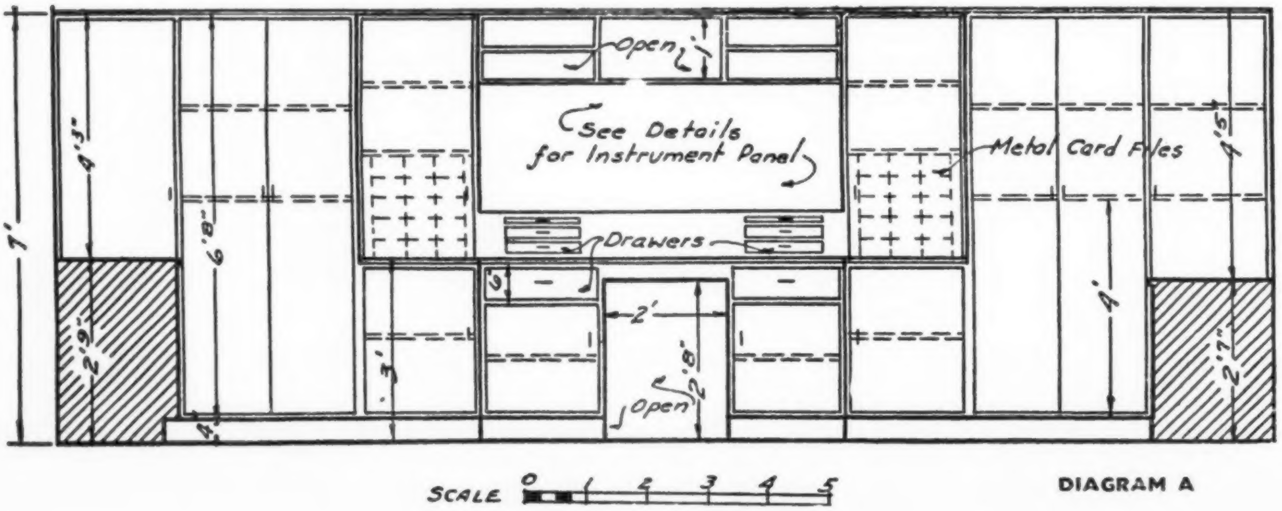
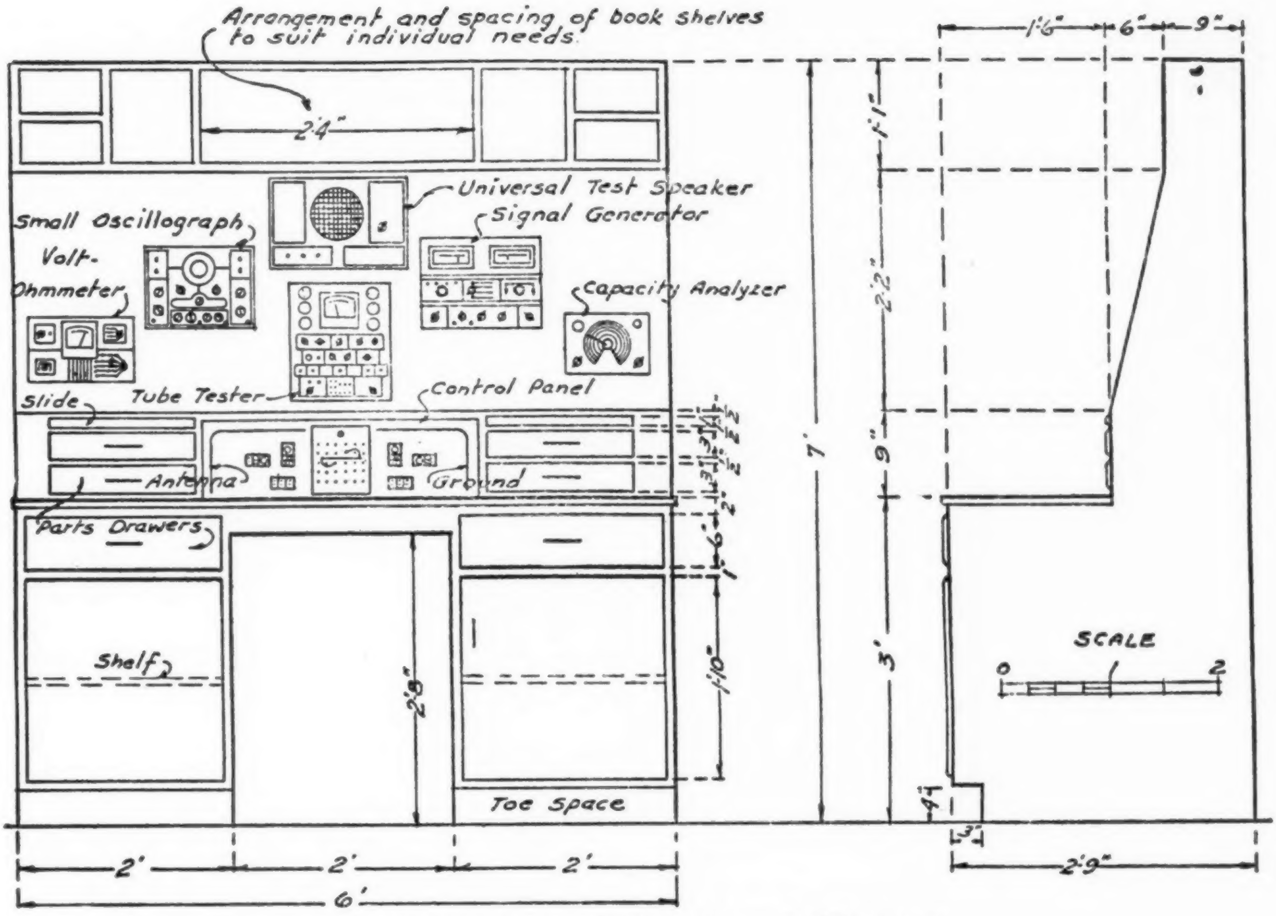


DIAGRAM A



ANALYSIS BENCH DETAILS

informed that severe shock may still be incurred while attempting to measure high voltages unless suitable voltage dividers are used.

6. Wide Band Oscilloscope. A 5" or 7" tube with amplifiers flat to 4 Mc.

7. FM Signal Generator 88-108 Mc. One whose frequency is accurately tunable within the FM band and capable of high quality modulation.

Servicing Television

1. Block Diagram of a Typical Television Receiver

Note from the block diagram of a typical television receiver that the television signal—composed of an AM picture carrier and a FM sound carrier—are selected and amplified in an RF Selector Stage and enter the First Detector where they are heterodyned with the Local Oscillator.

The IF signals with sound modulation are then separated from those with video modulation and pass through the Sound Intermediate Amplifier, Limiter and Demodulator circuits, then through the Audio Amplifier to the speaker.

The IF signals with video modulation are amplified in the Picture Intermediate Amplifier and demodulated in the Picture Second Detector.

The video signal as it leaves the Picture Second Detector is composed of

1. The signals which are amplified by a Video Amplifier and applied to the control grid of the CR Picture Tube and 2—The synchronizing signals which pass through the Synchronizing Separator which separates them from the other video components and also separates the vertical and horizontal synchronizing pulses from each other. From this point the horizontal synchronizing pulses enter the Horizontal Deflection Circuits to keep the horizontal saw-tooth wave in synchronization with that at the transmitter and the vertical synchronizing impulses enter the Vertical Deflection Circuits to perform a similar Function on the vertical saw-tooth. The horizontal and vertical saw-tooth waves are amplified and applied to the deflection system of the CR Picture Tube.

The High Voltage Rectifier supplies energy to the Picture Tube and the Low Voltage Rectifier supplies the other receiver circuits with power.

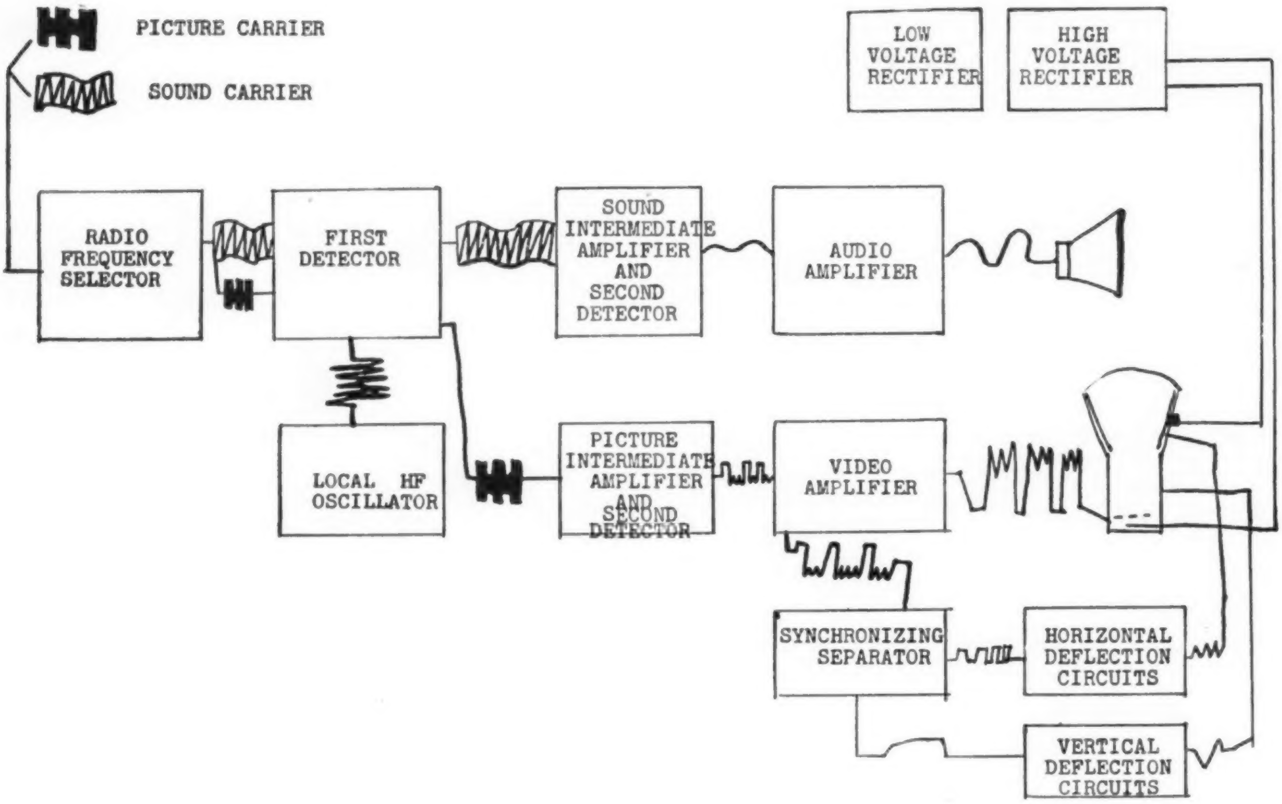
2. Servicing a Typical Television Receiver

The equipment required to service a typical television receiver may best be determined by considering each part of the receiver in some detail, studying its function, operating frequency involved, and the nature of the circuit components used, with particular emphasis on how such circuits differ from those of conventional broadcast receivers.

2a. *Low Voltage Rectifier, Audio Amplifier*

There is no servicing problem encountered in these

BLOCK DIAGRAM OF A TYPICAL TELEVISION RECEIVER


PICTURE CARRIER
SOUND CARRIER
LOW VOLTAGE RECTIFIER
HIGH VOLTAGE RECTIFIER
RADIO FREQUENCY SELECTOR
FIRST DETECTOR
SOUND INTERMEDIATE AMPLIFIER AND SECOND DETECTOR
AUDIO AMPLIFIER
LOCAL HF OSCILLATOR
PICTURE INTERMEDIATE AMPLIFIER AND SECOND DETECTOR
VIDEO AMPLIFIER
SYNCHRONIZING SEPARATOR
HORIZONTAL DEFLECTION CIRCUITS
VERTICAL DEFLECTION CIRCUITS

circuits that would differ appreciably from those met in a regular broadcast set and the usual methods of servicing would suffice.

2b. *High Voltage Rectifier*

The high voltage rectifier supplies the energy required by the picture tube which may vary from 2500 to 10,000 volts or higher at current in the region of several hundred microamperes. Prewar television receivers used 60 cycle step up transformers and rectified the high AC voltage to supply such power. The power supplies were dangerous to life in spite of the small wire size used because of the fairly large capacity necessary to filter properly the 60 cycle components from the rectified wave. Probably most post-war receivers will use r.f. oscillator type power supplies operating at a few hundred kilocycles with an r.f. step up transformer. Such power supplies are limited in their current capabilities by the power of the oscillator tube and should prove safe to use and service, especially since adequate smoothing of the rectified wave is obtained with only small mica capacitors holding a harmless amount of energy. Most servicing of prewar high voltage supplies was done by making resistance measurements and a similar technique will probably be used for post-war receivers although in addition, it will be necessary to check the simple r.f. oscillator in the supply to insure that the oscillator tube circuits are O.K. The resistances involved in the bleeder circuits will be in the order of tens of megohms so it would be advisable to recommend an electronic voltmeter such as the new R.C.A. type WV-75A Voltohmist, Silver's Vomax or Sylvania's forthcoming Polymeter for this and other reasons to be given later.

2c. *Horizontal and Vertical Deflection Circuit*

The deflection circuits of a television receiver are different from any encountered in a conventional receiver and can best be serviced by the use of an oscilloscope. It seems probable that most receiver service data will give the wave forms (Note Block Diagram) and the amplitude of such waves at various circuit points. With such information, trouble may be quickly located with an oscilloscope and with auxiliary voltage and resistance measurements. The oscilloscope will also be used in servicing other circuits of the set so consideration of its technical requirements will be determined later.

2d. *The Synchronizing Separator*

These circuits also differ from any in regular broadcast receivers and will require an oscilloscope to observe waveforms.

2e. *Video Amplifier*

Video amplifiers are of the resistance coupled type designed to amplify uniformly a wide band of frequencies (a few cycles to a few megacycles). The amplifier may be checked with volt-ohmmeter equipment and if it should prove desirable to check its over-all frequency response it may be done with the use of audio and r.f. signal generators and a prove type high frequency meter such as the Polymeter.

2f. *Picture Intermediate Amplifier & Second Detector*

Servicing and aligning the picture intermediate amplifier circuits calls for different equipment from that usually used in aligning broadcast receivers and may prove to be the most difficult job of television set repair. The picture i.f. differs radically from that of the broadcast band i.f. in that it must amplify uniformly a very much wider band of frequencies than the 10 KC wide 456 KC i.f. A typical response curve of a television picture i.f. is shown in the accompanying figure.

To secure such a broad pass band circuits consisting of overcoupled (inductive or capacitive or both) tuned circuits shunted with resistances of a few thousand ohms are usually used. The quickest and best means of alignment employs a wide band sweep generator (swept through the i.f. band) and a viewing oscilloscope connected into the second detector or video amplifier to observe the pass band response which will appear similar to that shown in the figure. Since the R.M.A. standard picture i.f. covers the range approximately 21-27 mc., it is advisable to use a sweep generator covering this range (and other ranges to be mentioned later) and capable of being "wobbulated" about ± 5 mc. e.g. from 19-29 mc. It is also important in a picture i.f. that the frequencies near the pass band of the i.f. be attenuated quite markedly. Thus, if we assume the sound i.f. to be at 21.5 mc, it is important that the frequencies of 21.5 mc. and 27.5 mc. (the sound channel of the adjacent television channel) be attenuated sharply to prevent sound signals from getting into the picture. For this reason, traps are used in the picture i.f. adjustable to these frequencies. The sweep generator used should have accurately calibrated "marker" impulses which can be superimposed on the pass band response curve as shown in the figure so that the traps may be properly adjusted and also so that the pass band may be properly adjusted.

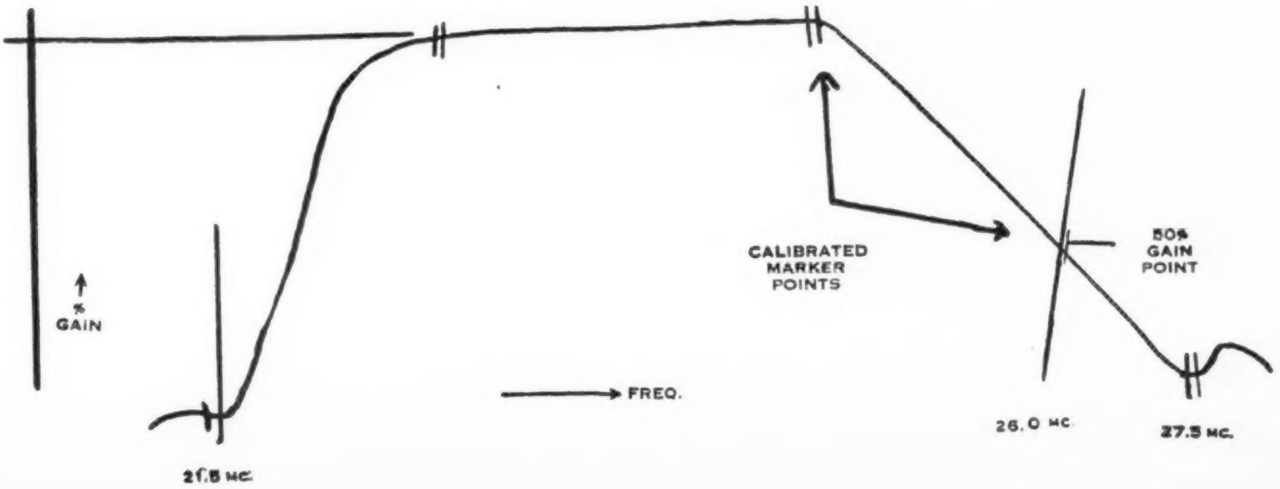
Some such generator would seem to be indispensable since it is laborious to the point of impossibility to align a picture i.f. with a standard "unwobbulated" signal generator. Note that none of the presently made "wobbulated" generators or oscilloscopes used to align high-fidelity broadcast i.f.'s are suitable since they sweep only a few kilocycles either side of center frequency.

There are at least two sweep generators that appear satisfactory for picture i.f. alignment being manufactured today. One is the R.C.A. type 709-B Sweep Generator which has a center frequency range of 5 mc. to 65 mc. and an adjustable sweep width of 1 to 20 mc. It lists at $625.00. Another is a U. S. Television Corp. TV FM Signal Generator which has a center frequency range of 500 KC to 100 Mc. and an adjustable sweep width from ± 5 KC to ± 5 Mc. It lists for $400.00. It seems likely that other manufacturers of test equipment will soon make available similar equipment probably at prices more in keeping with a service shop's range.

2g. *Sound Intermediate Amplifier, Limiter & Demodulator*

The sound intermediate amplifier, limiter, and demodulator circuits are similar to those used in the new f.m. receivers except that the R.M.A. standard i.f. for the second section of television receivers is between 21.25 and 21.9 Mc. while for conventional f.m. receivers it is 10.7 Mc. The prewar service instructions for servicing f.m. receivers mostly recommended f.m. i.f. and discriminator alignment by using a standard signal generator unmodulated and a vacuum tube voltmeter as an indicator. While such alignment may be satisfactory, it would seem

TYPICAL RESPONSE CURVE



that if an organization were set up to service both television receivers and f.m. receivers it would be most efficient to use a sweep generator and an oscilloscope in alignment of the f.m. sound section i.f. in television receivers and the i.f.'s of conventional 88-108 Mc. f.m. receivers. The U. S. Television sweep generator appears to do this adequately and also the R.C.A. type 709-B although a sweep narrower than the latter's minimum of 1 Mc. should be considered.

The oscilloscope used in making these adjustments as well as those in the synchronizing and deflection circuits should have a band-width in the vertical amplifier of about 100 KC and good low frequency response. Any of the oscilloscopes such as Triumph's or Dumont's 3" models, R.C.A.'s type 155-C or Sylvania's oscilloscope to be manufactured soon seem satisfactory. Of course it is desirable to have a screen pattern large enough to align this i.f. easily and a 3" or larger oscilloscope would be preferred.

2h. *Local HF Oscillator*

The television channels now being assigned by the FCC are 13 in number and cover frequencies in 2 bands of 44-88 Mc and 174-216 Mc. Since the heterodyne oscillator operates higher than the television carrier by the intermediate frequency, the local oscillator (or oscillators since 2 separate oscillators may be used for the 2 bands in many sets) must supply energy at from 71 Mc. to 240 Mc. approximately. The usual method of checking the operation of such an H.F. oscillator is to measure its developed grid bias with a high resistance voltmeter and also to check at the mixer grid of the first detector to see that the oscillator output at that point is developing sufficient bias voltage. A probe voltmeter of the Polymeter type may prove useful to measure the A.C. voltages at those frequencies.

2i. *The Radio Frequency Stage*

It will probably be customary in postwar television receivers to use an r.f. stage mainly to prevent radiation interference from the local oscillator. Such a stage must pass a band of frequencies about 6 Mc. wide with uniform gain. The r.f. circuits are not as difficult to align with an "unwobbulated" signal generator as a picture i.f. since the band width is less a percentage of the center frequency and the r.f. circuits are much less overcoupled. The generator must cover the entire television range either on fundamentals or harmonics. The U. S. Television Corp.'s sweep generator is one that covers all the channels to 110 Mc. (which includes the new f.m. broadcast band) with a sweep width adequate to align both television r.f. circuits and the r.f. circuits of f.m. receivers in the same manner as i.f. alignment.

3. Summing Up

The equipment needed to service television and f.m. receivers adequately in addition to those used in servicing conventional receivers are, a wide band sweep generator covering the i.f. bands at least, an oscilloscope, an electronic probe type volt-ohmmeter, a standard signal generator covering to 216 Mc. Those items among others now on the market or being advertised for sale which might make up the service complement are:

RCA. Voltohmist Model WV-75A
RCA Oscilloscope Model 155-C
U. S. Television Corp., TVFM Signal Generator 500 KC to 110 MC.
Simpson Signal Generator Model 415

Test equipment manufactured by Sylvania, it is reported, will be available to meet some of the needs listed above at some future date.

To recommend a minimum amount of servicing equipment for a television shop is difficult since it assumes that certain items of test equipment ordinarily used in an efficient set up are to be omitted in the interests of keeping initial equipment costs low.

The well equipped television service shop should have all the items mentioned in this "supplemental report." However, if it appears desirable to equip a television service shop with no more than approximately $200.00 worth of equipment, obviously the wide band sweep generator must be omitted. It is possible, but highly inefficient to align television sound and video IF and detector stages without such a sweep generator. Eliminating the sweep generator, it is then believed that the minimum equipment should be as follows:

Signal generator—100 Kc to at least 30 mc. on fundamentals

Volt-Ohmmeter—Voltmeter having 20,000 ohms/volt sensitivity

Oscilloscope—Such as referred to in this "supplemental report," although a smaller one could be used if necessary.

All of the foregoing assumes that the shop has an efficient tube tester.

PERSONNEL QUALIFICATIONS

Concerning the qualifications of a serviceman operating an f.m. and television service shop it is evident that the more complicated picture and f.m. circuits demand technique more advanced than conventional receivers require. The television serviceman must become familiar with oscilloscope technique, which is not complicated, and as he becomes skilled at interpreting wave forms in the receivers, his television servicing efficiency will improve. In addition to new circuits, there are many more tubes and components in television receivers than in regular broadcast sets, 18 to 20 tubes being a common figure. This will require an analytical approach to the receiver troubles somewhat similar to that used in servicing conventional receivers with a Chanalyst. For example, a "dead" television receiver won't be easily fixed by touching grid caps, etc., but given adequate equipment there is no reason to doubt that a present day "good" serviceman would make a good serviceman for television and f.m. receiver work.

In the committee's opinion, a successful prewar serviceman who gained some experience during the war using oscilloscopes in servicing radar should encounter no unusual difficulties in servicing television and f.m. receivers.

MAURICE S. DESPRES, *Chairman*

Know and Use These Promotional Programs To Build 1947 Sales

By W. C. Pirie

ON all sides today are heard constantly growing grumblings to the effect that a real buyers' market is readying itself to erupt in full force as new production records, set and smashed by industry, are speeding supply toward catching up with demand, thus giving the warning of the need for sales preparedness an extremely timely note.

This imminence of a buyers' market has already made itself felt in the field of certain small appliances such as radios and electric irons, for once more in many stores customers are shopping and reserving their buying decisions on these items.

Here, then, is actual and concrete evidence of the long-awaited and much-touted buyers' market and with a balancing of supply and demand of more and more electrical products as the year progresses, the contractor, the industrial and commercial buyer and the retail dealer will once again be "king" and will certainly exercise the right to pick and choose after being denied that privilege for so many years.

Forecasting, as it does, a highly competitive era of selling in the electrical field—not only between individual manufacturers, wholesalers and retailers—but within the electrical industry itself and all the other competitors for the consumer's dollar, serious consideration must be given to all those programs designed to make the work of the salesman more effective, more efficient and more economical.

There is no question today but that basic sales training for the wholesaler's salesman and his retail dealers and sales force is the industry's Number One need.

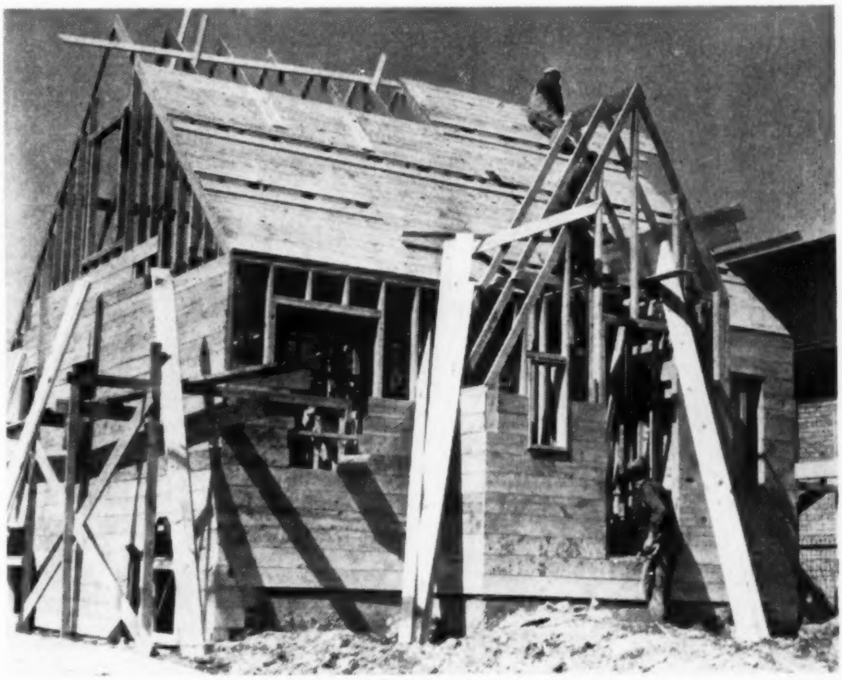
Of necessity during the war years "order-taking" was the usual procedure with a maximum of time and effort spent in expediting scarce and much-needed electrical goods into the customer's hands. Under such conditions it is safe to assume that "selling-ability" suffered a severe setback and it is also just as reasonable to predict that it will have to be reinstated more strongly than ever before in this coming "survival of the fittest" market.

Basic Sales Training Program

Realizing early in 1946 that new high standards in salesmanship would have to be attained to successfully move the greatly expanded productive capacity of the electrical industry, the Edison Electric Institute and the National Electrical Wholesalers Association prepared and delivered to the industry a basic sales training "package" that is complete in every detail.

The "package" consists of a leader's guide, sound slide films, silent trailer films and salesmen's manuals —enough material for a series of nine complete meetings on salesmanship and covering the sales of electrical products to the four primary markets: Industrial, Commercial, Residential and Rural.

The make-up of the program al-



A powerful argument in helping the builder sell is the Adequate Wiring Certificate, for here is proof to the prospective buyer that the home is wired for modern electrical living.

lows the material to be presented so that the salesman can immediately put what he learns into effect and the entire course is built up around specific assignments that the salesmen are given to carry out in the interval between meetings.

The electrical wholesaler can use this program to good advantage in training or "re-training" his own sales organization and upon completion can profitably use it to train the sales forces of his dealers.

Wide acceptance by electrical wholesalers, utilities and electrical leagues prove only too well the "sales-consciousness" of these groups and the determination to take action to raise and intensify selling efforts in the electrical industry.

Survey as of the first of the year showed that throughout the country more than 25,000 had already participated in the course with more trainees joining the ranks all the time. This survey also showed that use by dealers was far below expectations. A bogging down of the program at the dealer level means inadequate preparation to face the buyers' market—a serious condition that must be remedied by intensive effort now to enroll dealers and their salesmen in the program.

Scientific Personnel Selection

Under the name "Hiring Kit," N.E.W.A. has also had prepared by the Personnel Institute, Inc., a program designed for the orderly and scientific approach to the recruiting and selecting of personnel with particular emphasis on selling. The purpose of this program is to secure a new high in personnel efficiency throughout the entire field of electrical distribution by putting the right person into the right job.

Two kits are available; one for N.E.W.A. members and one for their dealers with each kit giving complete hiring procedures in packaged form including aptitude testing the use of which is optional.

It has been established that the use of scientific hiring methods, including aptitude testing, can be of great benefit to the electrical wholesaler and, through him, to his dealers. While these methods may possibly have wider application in the hiring of salesmen, they can apply with equal value to applicants for any job and through their intelligent use costly mistakes in hiring can be avoided.

In addition, aptitude testing can be used now to evaluate present personnel in order to strengthen the organization itself. Turnover of unqualified employees can be reduced and the productive value of all employees raised because they will be placed in the jobs for which they are best fitted.

When aptitude testing is used, finished forms may be sent to the Personnel Institute, Inc., for individual rating—a service which is rendered by the Institute at low cost.

Through making such programs available the National Electrical Wholesalers Association has made a highly commendable contribution to the industry and effective use of them by electrical wholesalers and their dealers will do much in hastening the day of full preparedness to meet the coming "battle of distribution."

National Adequate Wiring Bureau

With the forecast that 950,000 new homes will be built during 1947 and that 4,000,000 new homes will be built in the first five postwar years, the importance of the work done by the National Adequate Wiring Bureau in informing and educating the public takes on a new light. Not to be overlooked, either, is the fact that few of America's 28,000,000 wired homes contain sufficient wiring or outlets.

Since the work of the Bureau in furthering the cause of adequate wiring vitally affects every member of every branch of the electrical industry, the electrical wholesaler and his salesmen not only have the opportunity but also the obligation to get squarely behind the promotion of this valuable program. A unified effort by all will achieve the prime purpose of the Bureau—"to promote the installation of sufficient wiring to allow fullest enjoyment of electrical living in the homes of America."

Electrical wholesalers and their salesmen are certain to increase sales volume as the Adequate Wiring program gains momentum and recognition, for increased sales of wiring, electrical supplies and appliances will naturally follow installation of adequate wiring in homes.

"Plan of Action"

The program as presented and now being aggressively and successfully promoted throughout the country calls for the establishment of "local" Adequate Wiring Bureaus with representatives from the various groups that go to make up the local electrical industry—just as the National Bureau is made up of representatives from the five national associations: the Edison Electric Institute, the International Association of Electrical Leagues, the National Electrical Contractors Association, the National Electrical Manufacturers Association and the National Electrical Wholesalers Association.

The plan of procedure is complete in every detail and includes suggestions as to what committees should be established and the scope of their work.

Once established, the aim of the local bureau is to take all the necessary steps to inform, educate and sell local buyers on the advantages of Adequate Wiring Certification—both in the new home and home modernization markets.

Certified Adequate Wiring is identified by an emblem registered with the United States Patent Office and provides a nationally accepted definition of the minimum wiring installation in a home.

Locally the plan includes the following elements:

1. A specification for local use approved by the National Adequate Wiring Bureau.
2. A license to operate the Certification Plan on the basis of an approved local wiring standard with this license granted by the National Adequate Wiring Bureau.
3. Promotion materials to aid in educating the public to the benefits derived from an adequately wired home.
4. Local field service to promote the certification plan by personal contacts; to take care of inspection of installations and to see that certificates are awarded and identification emblems permanently affixed.

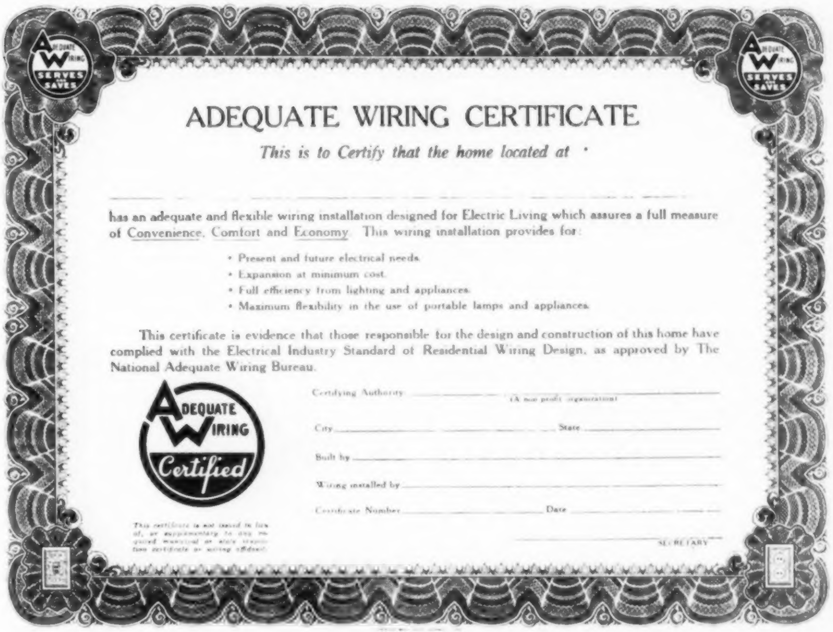
An active part should be taken by the electrical wholesaler and his salesmen in the formation and operation of the local bureau. They can make a valuable contribution by serving on committees and assisting in the clerical and detail work that must be done, as well as helping contractors and dealers in training employees to promote the program.

N.E.M.A. Programs for 1947

With its many sections—each working on its own problems—developing its own activities and programs and concentrating on its own individual markets—the National Electrical Manufacturers Association offers inestimable help to the electrical wholesaler and his salesman in enlarging local markets for electrical products.

Among its projects for 1947 affecting the wholesaler and his salesmen are those such as Electrical League Cooperation. These leagues made up of all branches of the electrical industry—utilities, wholesalers, contractors and dealers—provide a splendid vehicle for coordinated effort in the communities in which they are located. N.E.M.A. plans to keep the leagues fully informed regarding national programs of educational and promotional nature; arrange for interchange between leagues so that experience obtained in individual communities may be available to others; help to set up new local electrical leagues, and assist in organizing and conducting the annual conference of the International Association of Electrical Leagues.

The manufacturing members of the Executive Committee of the National Adequate Wiring Bureau are elected from N.E.M.A. and the work of the Bureau has been previously outlined.



ADEQUATE WIRING CERTIFICATE

This is to Certify that the home located at

has an adequate and flexible wiring installation designed for Electric Living which assures a full measure of Convenience, Comfort and Economy. This wiring installation provides for:

- Present and future electrical needs.
- Expansion at minimum cost.
- Full efficiency from lighting and appliances.
- Maximum flexibility in the use of portable lamps and appliances.

This certificate is evidence that those responsible for the design and construction of this home have complied with the Electrical Industry Standard of Residential Wiring Design, as approved by The National Adequate Wiring Bureau.

Certifying Authority ______ (A non profit organization)
City ______ State ______
Built by ______
Wiring installed by ______
Certificate Number ______ Date ______
______ SECRETARY

This certificate is not issued in lieu of, or supplementary to any required municipal or state inspection certificate or wiring affidavit.

To the buyer this certificate is a guarantee that the home is adequately preparea for modern living and furnishes an easy means of showing added value should he ever desire to sell.

Farm Market Rapidly Growing

The Farm Electrification Project comes in for a large share of attention in 1947 now that 3,000,000 farms are electrified and hundreds of thousands more are scheduled to receive electric service in the near future. This project calls for a continued program of informative publicity to the farmer pointing out that the use of electrical equipment in his home and on his farm is in the best interests of efficient, profitable farm operation and comfortable, healthful living for his family and that adequate wiring is necessary to permit the most efficient operation of electrical equipment. Also provided will be necessary information about proper wiring of farm structures and to the manufacturers of farm equipment will be furnished information on the best means of electrifying such equipment.

For the development of rural and suburban areas, much of which is newly wired and most of which will soon be wired, a plan book is now being prepared. This will include complete promotional activities, sales manuals and an educational film. The project also calls for maintaining close and frequent contact with the sales and merchandising departments of power companies.

Other N.E.M.A. programs of interest to the electrical wholesaler and his salesmen are the Electric Range Project which calls for an expanded advertising activity directed to teachers and home economists; a continued program of advertising to architects, builders and prospective home buyers to insure provision of adequate service entrance wiring and range circuits, and cooperation with the Electric Water Heater Program in the promotion and use of a plan book for public service company use.

The promotion of electric water heating for household use by architects, builders, dealers, utilities, plumbers and lending agencies will be the subject of national magazine advertising and a separate campaign will be used in national plumber's magazines.

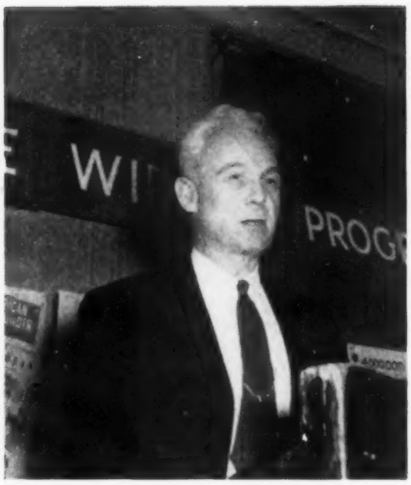
Industrial and commercial lighting are again in the spotlight with the announcement of the Second International Lighting Exposition scheduled at the Hotel Stevens, Chicago, the week of November 3rd. Sponsored by N.E.M.A.'s Industrial and Commercial Lighting Committee this event will draw national attendance and will build national interest. Also available from the committee will be a series of direct mail campaigns dealing with specific lighting subjects such as store, office and plant lighting.

The Electric Fan Program stressing the importance of ventilation in the home, the office and the workroom will be continued, as will be the Flexible Cord Label and Armored Cable Programs.

With these timely and valuable contributions to the expansion of the electrical market N.E.M.A. offers a group of programs that are of direct benefit to the electrical wholesaler and coupled with those of N.E.W.A. and the National Adequate Wiring Bureau, will give the electrical wholesaler and his salesmen staunch support in building 1947 sales volume to new high levels.

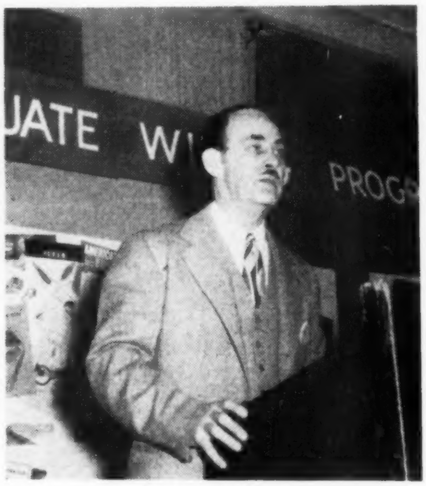
Electrical Wholesaling's CAMERA CLICKS

At the NATIONAL ADEQUATE WIRING BUREAU'S Annual Conference in Chicago



Edward G. Gavin, editor, American Builder, gave tips on promoting electrical living to building contractors.

H. E. Seim, v.p. and gen. mgr., Bryant Electric Co., predicted elimination of most shortages in late 1947.



Herbert E. Cook, of the Detroit Edison Company acted as general chairman of the Adequate Wiring forum.

ADEQUATE WIRING
THE KEY TO ELECTRICAL LIVING
SERVES AND SAVES

Reflecting the country-wide consciousness of the need for the Adequate Wiring program, more than 100 key executives of the electrical industry recently attended the National Adequate Wiring Bureau's annual conference in Chicago and heard leading industry speakers cover the markets for adequate wiring, certification, electrical living and adequate wiring promotional activities. Those attending came from points as far distant as San Francisco, Spokane, New Orleans and Atlanta as well as various cities along the eastern seaboard.

Above—R. V. Main, supervisor of Cleveland Elec. Ill. Company's Home Planning Bureau, tells their ideas on interdependence of wiring promotion and other residential promotional activities.

Right—General view of some of 102 key executives from leagues and utilities throughout the country who attended the National Adequate Wiring Bureau's annual conference in Chicago. The meeting drew attendance from points as far distant as San Francisco, Yakima, Spokane, New Orleans and Atlanta, as well as various cities along the eastern seaboard.

REWIRE AND RELIGHT AMERICA *adequately*

NATIONAL ADEQUATE WIRING
FOLLOW THIS GUIDE
ELECTRICAL CONVENIENC

Two home builders visit the National Adequate Wiring Bureau's booth at the National Ass'n of Home Builders' show in Chicago to discuss the sales advantages of installing adequate wiring. E. S. Northup, of the National Adequate Wiring Bureau, explains the merchandising value to the builder in equipping homes with certified adequate wiring.

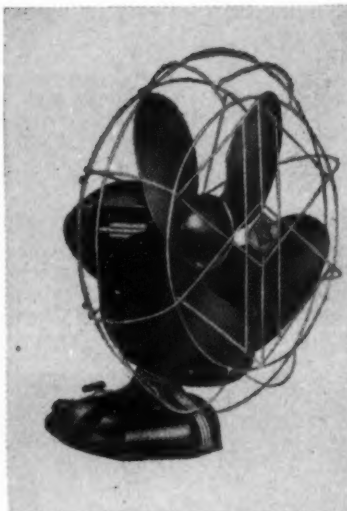
Below—E. J. McGinnis, business manager of Cincinnati Electrical Association (left) and Carl Christine, secretary-manager of the St. Louis Electrical Board of Trade, discuss the fine points of wiring promotion.

Below—Henry D. Edmiston, ass't vice pres. of the National Life Insurance Company of Vermont, explains the "packaged mortgage" plan in financing appliance sales in new homes.

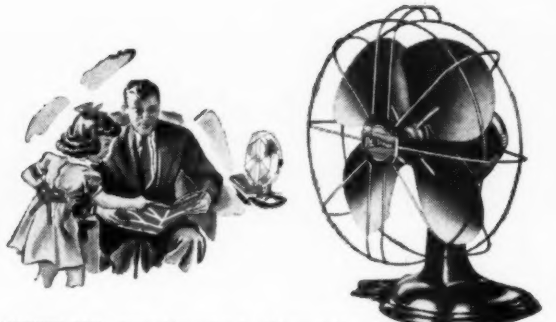
Below—A. H. Kessler, promotion mgr. of North Central Electrical Industries, was moderator of the forum on adequate wiring promotion.

The NATIONAL ADEQUATE WIRING PROGRAM

Left—Among those attending the wiring forum held in Chicago, by the National Adequate Wiring Bureau were: Seated at speakers' table: H. E. Merrill, product promotion mgr., G. E.'s Wiring Devices Div., and chairman of the Bureau's Plan Committee; H. P. Wilson, sec.-mgr., Electrical Institute of Tri-Cities; on the rostrum, Herb Cook, director of Adequate Wiring for the Electrical Ass'n of Detroit; Thomas S. Holden, pres., F. W. Dodge Corp.; H. E. Seim, vice pres. and gen. mgr., Bryant Electric Co.; and Edward G. Gavin, editor, American Builder.



DE LUXE FAN Body, base, and blades in lustrous pearl-essence finish with contrasting silver striping and bright guard. Modern, durable, die-cast motor body and base. Totally enclosed oscillating mechanism. Wide, overlapping 10, 12, and 16-inch blades give unusually quiet delivery of large air volume. Three speeds on 12 and 16-inch fans. Price includes bracket for wall mounting. Guaranteed five full years.



BANNER FAN Popular-priced. Gives big air delivery at low current cost. Lustrous dark brown finish. Streamlined, sturdy, die-cast motor body and base. Totally enclosed oscillating mechanism. Wide, quiet-running 10, 12, and 16-inch blades. Two speeds on 12 and 16-inch fans. Wall-mounting bracket included. One full year guarantee.

Available Now!

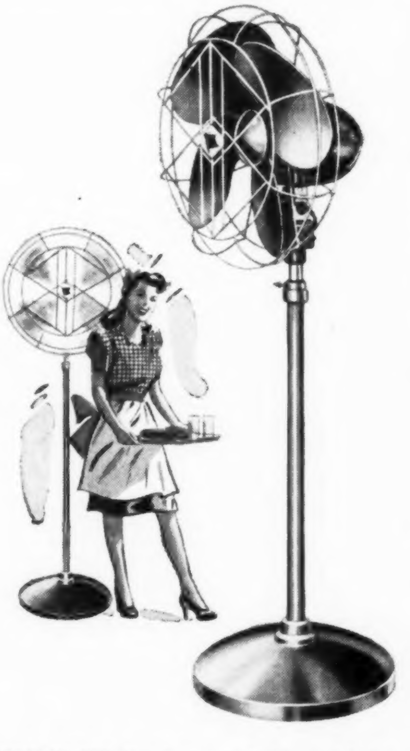
R & M FAN STYLES TO SUIT ALL YOUR CUSTOMERS!

With the R&M Fan line you can handle every cooling problem—from a single room to a whole house. Here are styles to suit every taste—prices to fit all purses.

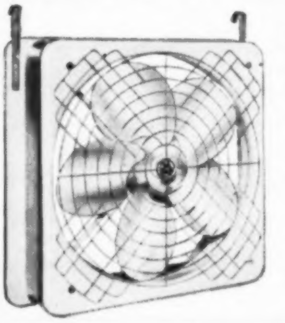
This summer, get the prestige (and profit) due an expert on low-cost ventilation. Get the good-will of satisfied customers by being able to recommend the right fan in the right place on a guarantee that's as good as gold.

National advertising helps you merchandise them. Point-of-sale material, newspaper mats, and other sales stimulants (all at no cost to you) help you sell them. So, see your nearest R&M Fan distributor OR mail the coupon for his name, address, and literature on this fast-selling R&M Fan line.

ROBBINS & MYERS, INC. SPRINGFIELD, O., BRANTFORD, ONT.

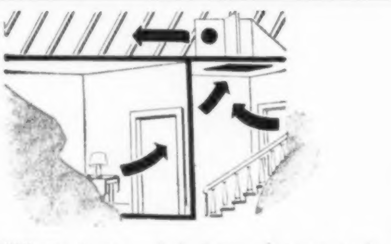


PEDESTAL FAN Pearl-essence finish on blades, motor housing and base. Brightly finished guard. Adjustable for height—12 and 16-inch models from 38 up to 62 inches; 10-inch fan from 35 to 59 inches from floor to center of guard. Wide, quiet-running, overlapping 10, 12, and 16-inch blades. Totally enclosed oscillating mechanism. Two speeds on 12 and 16-inch fans. Guaranteed five full years.

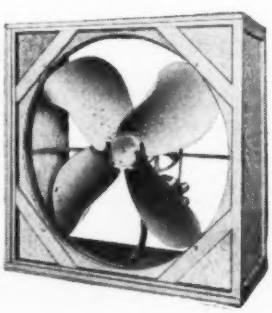


HOME COOLER It's *portable*—customers set it into open window; take it along when they move! *Ultra-quiet* operation—no belts . . . no pulleys . . . motor mounted on live rubber. Rich ivory finish. A space-saver—extends only 6½ inches into room!

In 24 or 30-inch sizes to fit most windows; in 24-inch size mounted on adjustable stand. Three speeds on all models. One full year guarantee.



ATTIC FAN Cools the *whole* house for years—for less than the cost of a week's vacation. Available in 30, 36, 42, and 48-inch sizes to suit any type of installation. Fan operates in any position because ball bearings are used throughout. Quiet-running—motor mounted on live rubber; blades driven at slower speeds. Four wide, scientifically designed blades within true Venturi Ring that eliminates excessive "air whip" and inefficient re-circulation.



WHOLESALERS' SALESMEN!

This ad is the first of a series designed to help you sell R & M Fans. Timed right for the buying season, pitched perfectly to give dealers the product information they want, it appears this month in *Electrical Merchandising, Electrical Dealer,* and *Electrical South.*

MOE *Light*

M-1023

It's a big year for home building

and a big year of opportunity for Moe Light Distributors

BARRING serious interruptions, 1947 looks like a record-breaker in the residential building field. For Moe Light distributors, it promises to be a record-breaker in the sale of residential lighting fixtures.

The Moe Light program is geared up to this opportunity — and the Moe Light line is designed to fit the special requirements of your 1947 market.

In merchandising of so-called "long" lines, it is common experience that 20% of the items produce 80% of the business. What Moe Brothers have done is to *concentrate on the productive* 20%.

In production, this means not *how many* but *how good* — better designs, better engineering, modern packaging, mass production at lower cost.

In wholesaling, it means a lower inventory, with the slower items out — less investment — faster turnover — bigger volume — bigger profits.

In merchandising, it means traffic items for traffic outlets (including a new group of "plug-in" items) — getting you out into the main stream of volume retailing where the real money-making opportunity is.

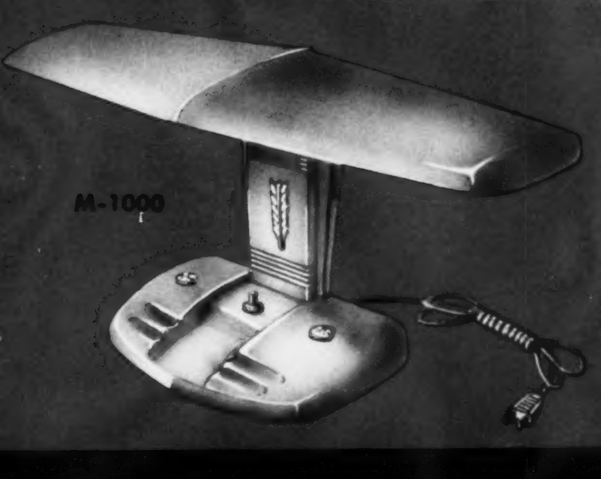
Moe Brothers have the facilities to back up this program — turn the page for evidence.

turn the page for further information

M-1016

M-822

M-218



M-1000

M-1324

① Moe Brothers modern plant is designed to supply you with top-quality merchandise at prices that sustain volume sales when emergency demand is satisfied.

Production-line manufacturing methods assure volume production and costs geared to volume sales.

② Large-scale operations, typified by this battery of punch presses, supply you with an unprecedented volume of merchandise to meet today's growing demand for Moe Lights.

A source that's *big enough* to do the job *right!*

. . . and is already turning out more Moe Lights every month than at any previous time in Moe Brothers' history!

See illustrations of new lamps and fixtures on preceding page.

Delivery delays are often disappointing, to you and to us. But let's look at the bright side of the picture:

During every recent month, our factories have shipped enough Moe Lights to beat every prewar record. But this just isn't enough to meet the demand. Additional production lines are going into service as rapidly as they can be completed.

And we mean *production lines* — for modern, mechanized mass production based on high-grade engineering, a heavy investment in equipment, and the latest in quality-control methods.

We have recently completed and are now operating in a substantial addition to our modern plant. Floor space has been increased 330% over 1941 facilities, manpower 370%.

This means *more deliveries faster* — and for the long pull, it assures the combination of top quality and low cost that wins in competitive merchandising to the American public.

Moe Brothers products are distributed to a limited number of selected electrical wholesalers in each territory. Write for additional information today.

MOE BROTHERS

MOE BROTHERS *Manufacturing Company*

FORT ATKINSON, WISCONSIN

Annual
Anniversaries
Review

AS ALL history is the story of the individuals who lived it, so the history of the electrical industry is the story of men who conquered its problems—of those, who as manufacturers, developed its products, and of others, who as wholesalers, took them to market. It is their vision, virility and untiring effort that built its remarkable record of stability, ever broadening influence and unbelievable growth.

Some of today's electrical concerns were engaged in manufacturing or wholesaling of other products long before the electrical industry was born; others entered the field while the industry was still in its swaddling clothes, and grew with it; others came into being with the invention of specific new electrical products, new applications, new expansions, and have kept abreast of its advances ever since.

This Annual Anniversaries Review is published as an expression of our appreciation for the cooperation which electrical manufacturers and wholesalers have extended to this publication in the past. Our hearty congratulations and sincere good wishes for continuing success go to those concerns that celebrate in 1947 an anniversary of twenty-five or more years, divisible by five.

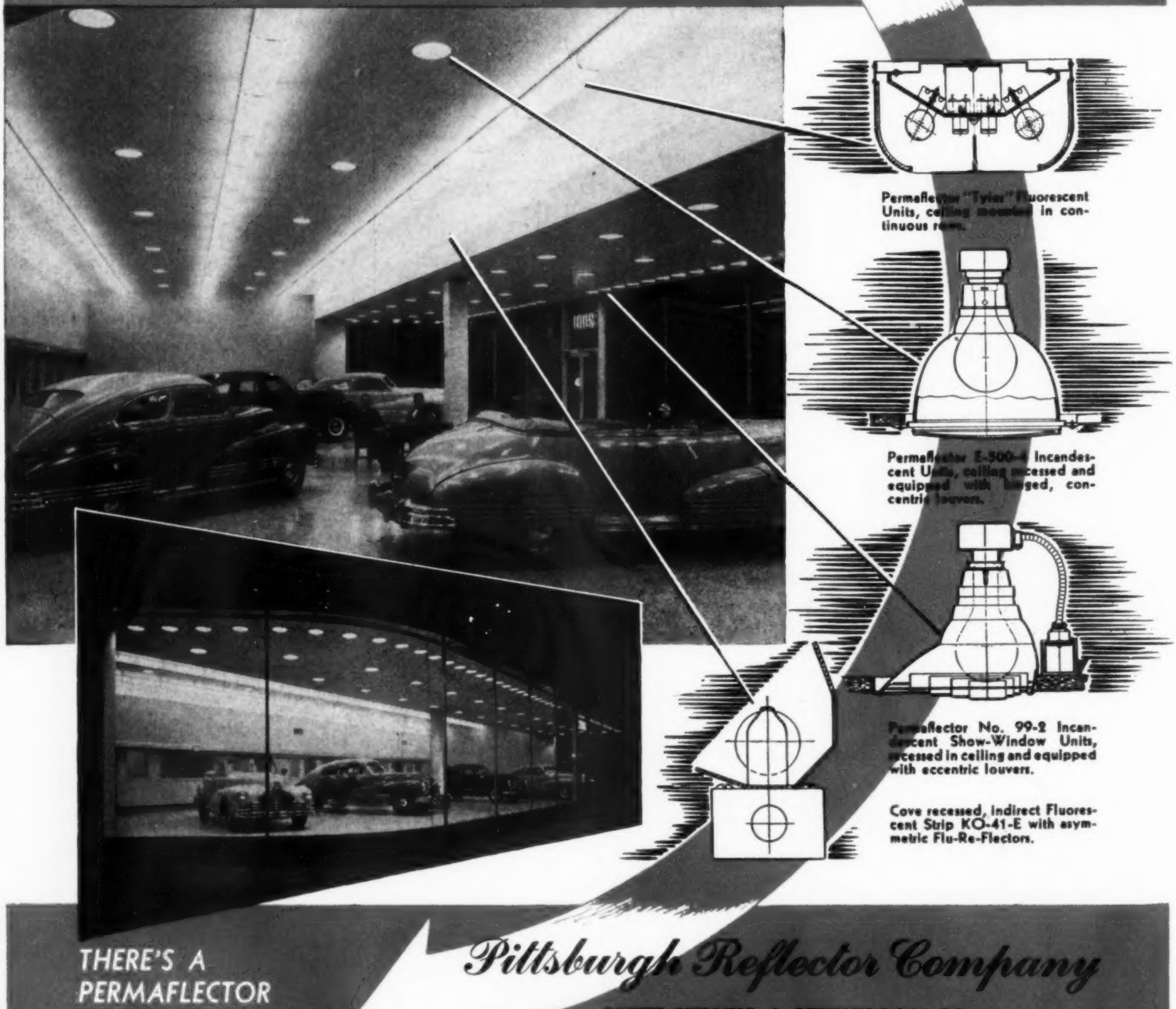
The EDITOR

A Designed...
LIGHTING INSTALLATION
by— Pittsburgh Permaflector

Standard Pittsburgh Permaflector Fluorescent and Incandescent Lighting Equipment can be used to produce *custom designed* illuminating results in all types of commercial, institutional and industrial installations.

The wide application possibilities—plus topnotch engineering and simplified installation—give you decided selling advantages when you handle this prestige line.

And because you meet all lighting equipment requirements—whether fluorescent, incandescent or a combination of both—the "packaged" Pittsburgh Permaflector line brings you *more* lighting business, *added* profits and increased customer satisfaction.



Permaflector "Tyler" Fluorescent Units, ceiling mounted in continuous rows.

Permaflector E-500-4 Incandescent Units, ceiling recessed and equipped with hinged, concentric louvers.

Permaflector No. 99-2 Incandescent Show-Window Units, recessed in ceiling and equipped with eccentric louvers.

Cove recessed, indirect Fluorescent Strip KO-41-E with asymmetric Flu-Re-Flectors.

THERE'S A PERMAFLECTOR FOR EVERY PURPOSE . . . .

Inquiries invited on specific applications.

Pittsburgh Reflector Company

OLIVER BUILDING • PITTSBURGH 22, PA.

MANUFACTURERS OF PERMAFLECTOR LIGHTING EQUIPMENT

DISTRIBUTED BY BETTER ELECTRICAL WHOLESALERS EVERYWHERE

Permaflector Sales Engineers in Principal Cities

Annual
Anniversary
Review

100 YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

and over

Manufacturer 135 YEARS 1812-1947

WATERBURY COMPANIES, INC.
WATERBURY, CONNECTICUT

Established 1812

IT WAS during the war of 1812, when countless buttons adorned the uniforms of sailors and soldiers, that Aaron Benedict decided to enter the button manufacturing business. Scouring the countryside for brass and pewter, he established a rolling mill and rolled his own blanks for pressing the buttons. Prospering in this business, Benedict with Gordon W. Burnham, formed the Benedict and Burnham Co., one of the first brass casting companies in this country and in 1849 combined with Hayden and Sons to establish the Waterbury Button Co. Today plastics also play an important part in the company's activities but a great variety of other products also flow from its production lines. Present head of the company is President Warren Kaynor.

Manufacturer 105 YEARS 1842-1947

LANDERS, FRARY & CLARK
NEW BRITAIN, CONNECTICUT

Established 1842

EARLY in 1842 George M. Landers and Josiah Dewey formed a partnership to make cupboard catches, furniture casters and other small articles. Subsequent reorganization followed and in 1865 the name of the company was changed to Landers, Frary and Clark with production devoted to scales, balances, faucets and other metal products. Later additions to the line were cutlery and various types of housewares, all marketed under the name of "Universal." Today the company offers a diversified line including many electrical appliances both major and traffic and has large manufacturing facilities centered at New Britain, Conn. A. E. Allen is chairman of the board and R. L. White is president.

Wholesaler 100 YEARS 1847-1947

ORGILL BROS. & CO.
MEMPHIS, TENNESSEE

Established 1847

OVER one hundred years ago, William Orgill and his brother, Joseph, bought out a hardware store in Virginia, and had the equipment and supplies shipped down the Ohio and Mississippi Rivers to Memphis, Tennessee where on April 1, 1847 they opened the Orgill Brothers' Hardware Company.

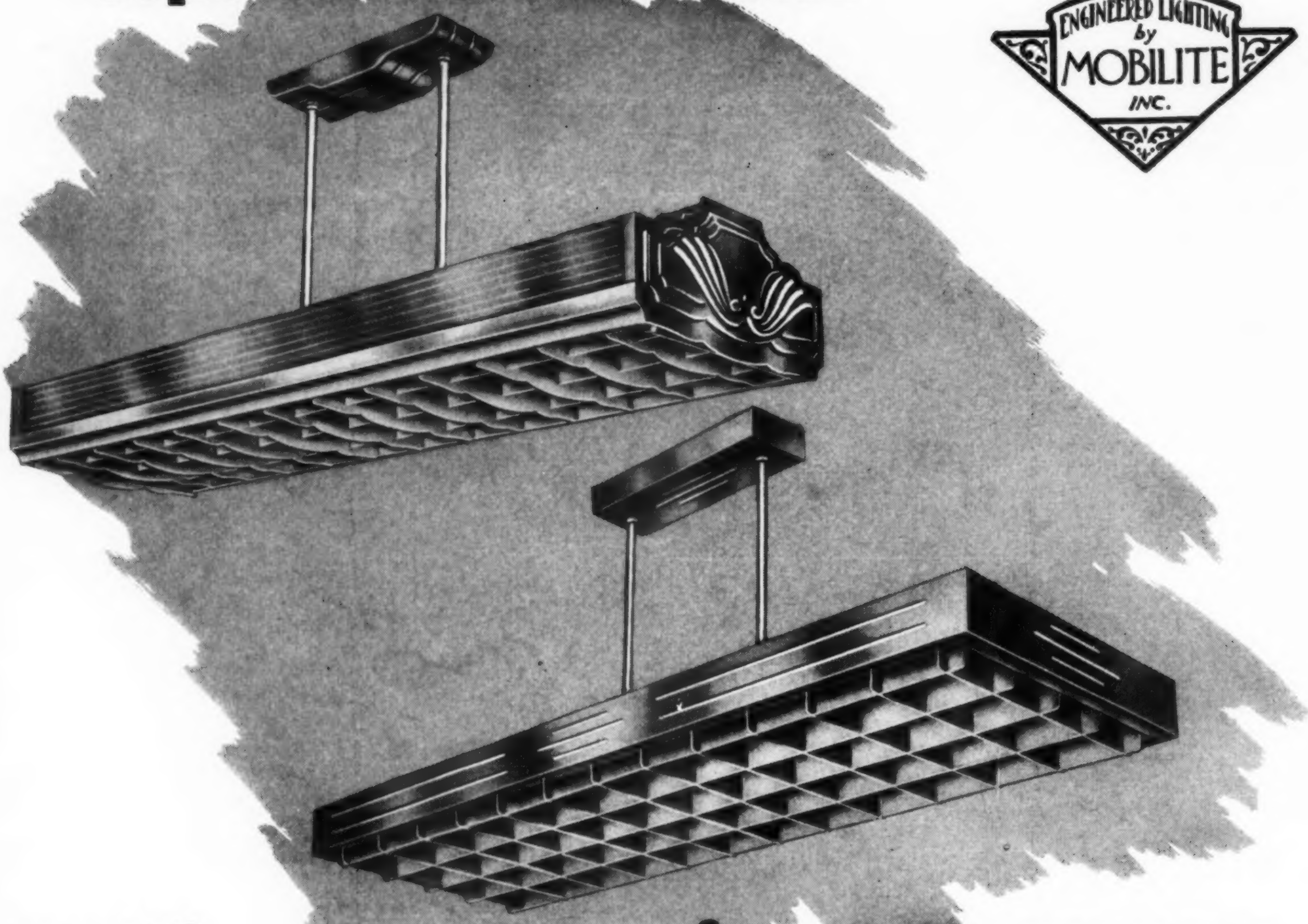
Orgill Bros., one of the largest as well as one of the oldest wholesalers in the electrical field, has in recent years added to its line of merchandise electrical appliances, water pumps, and other electrical equipment.

The company is proud of the fact that only once during its 100 years in business, did the Orgill Bros. Company close its business temporarily—and that was in 1878 during the yellow fever epidemic.

The present executives of the company, Edmund Orgill, Kenneth Orgill and W. I. Moody, celebrated the company's 100th birthday by holding two employee banquets—one banquet being held at the Booker T. Washington High School on March 28 and the second banquet and dance was staged at the Hotel Peabody on March 29.

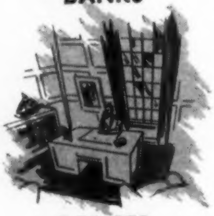
"Super-Vision" Mobiliers

ENGINEERED LIGHTING
by
MOBILITE
INC.



for every purpose

BANKS



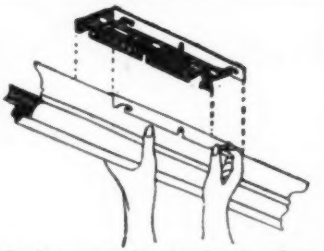
OFFICES

STORES

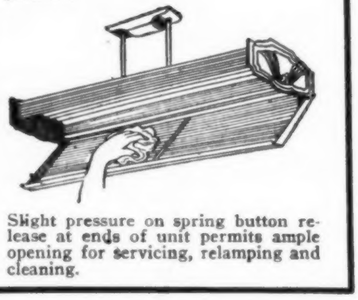
SCHOOLS

When considering a fluorescent installation look to Mobilite. The entire line of "Super-Vision" Mobiliers is constructed to give trouble-free service and designed to complement interiors. "Super-Vision" Mobiliers are available in types for every requirement . . . for offices, stores, smartly decorated salons, banks, schools, institutions. Ideal for high or low ceilings or under balconies. Standard attachments readily convert single units to a continuous run, flush or suspension, single or double stem. All the elements of modern design, highest efficiency, minimum maintenance, functional flexibility and superior craftsmanship have been incorporated in these high quality fluorescent units. Yes, look to Mobilite for your guarantee of the finest in fluorescent fixtures.

Write for Catalog W



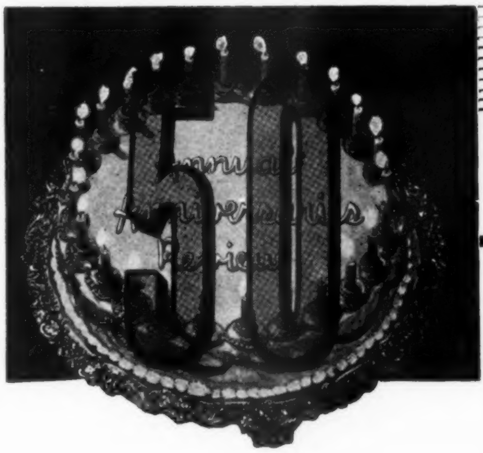
Surface mounting bracket is adaptable to all "Super-Vision" Mobiliers. Fixture is easily slipped into firm position.



Slight pressure on spring button release at ends of unit permits ample opening for servicing, relamping and cleaning.

MOBILITE, INC.

Manufacturers of Fluorescent Lighting
JERSEY CITY 6, NEW JERSEY



YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

to 99

Manufacturers 90 YEARS 1857-1947

THE FRINK CORPORATION
LONG ISLAND CITY, N. Y.

Established 1857

FOUNDED by I. P. Frink in 1857, when the manufacture of daylight reflectors was a good business to be in, the Frink Corporation soon expanded into production of oil lamps in clusters and placed under a reflector to spread the illumination over a large area. Since then the company has consistently pioneered the application of new lighting sources and developed and improved equipment for the utilization of these new artificial light sources as they came into being. Today it offers complete lighting service for industrial, commercial and private use.

MATHIAS KLEIN & SONS
CHICAGO, ILLINOIS

Established 1857

WITH 90 years of experience in the manufacture of quality tools for linemen, electricians and mechanics, this company carries on the tradition and aims of its founder, while two of his grandsons, Joseph A. Klein, Jr., and Mathias A. Klein, today are president and vice-president and treasurer respectively, with H. B. Wilson acting as secretary and general sales manager.

THE RATTAN MANUFACTURING CO.
NEW HAVEN, CONNECTICUT

Established 1857

NINETY years ago the Dann brothers started in business manufacturing folding camp stools such as those widely used in the Civil War to replace the cracker boxes which the men in the Army had been using. From camp stools, all kinds of folding chairs were developed and later on furniture and other items which could be made from "rattan" were added. In 1906 the Rattan Mfg. Co. was incorporated, replacing The New Haven Folding Chair Co.

Years prior to 1912, the company manufactured conduit fittings as well as "rattan" items but in 1932 discontinued manufacturing everything except conduit fittings. During World War II the company supplied millions of parts for airplanes. Paul N. Dann, son of the original founder, is president and treasurer of the company today. O. L. Dann is first vice president, and G. H. K. Miller is second vice president.

Wholesalers 85 YEARS 1862-1947

STRATTON & TERSTEGGE CO.
LOUISVILLE, KENTUCKY

Established 1862

BACK in 1862 when Louisville, Kentucky, boasted a population of 68,000, a one room store for selling tinware was opened in the western section of the city by Jacob Thome, Jr. Just as the city grew to a population of about 319,000, so too did the small store of Jacob Thome grow and expand to become a very large electrical wholesale supply house now known as Stratton & Terstegge Co.

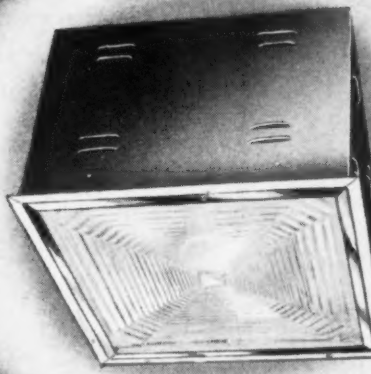
Now in its eighty-fifth year the company, which is located at Main and 15th Street, Louisville, employs seventy general salesmen. Executives at Stratton & Terstegge today include: W. H. Terstegge, president; W. L. Schultz, vice president; P. A. Terstegge, secretary; J. F. Thoben, treasurer; V. H. Weber, credit manager; C. F. Atkinson, Sr., general manager; J. W. Massie, sales director; M. V. Hodapp, managing buyer; J. H. Brinton, manager specialty division; A. P. Koch and J. H. Sanders, divisional sales managers.

THE SWANK HARDWARE CO.
JOHNSTOWN, PENNSYLVANIA

Established 1862

EIGHTY-FIVE years old and still growing, that is the story of the Swank Hardware Company of Johnstown, Pa. The firm, which was founded in 1862 by Jacob Swank, recently purchased a new building, one block from its present location, in order to be able to handle its expanding wholesaling business more efficiently. The new building provides parking space for 125 cars and trucks. Mr. Swank originally established the business for the pur-

Kirlin


KIRLIN No. 1218 Square Model — 500 watt Mogul base lamp.

KIRLIN No. 1208 — 150 W., or No. 1212 — 300 W. for wide distribution of light.

KIRLIN RECESSED LIGHTING

FOR BETTER SALES VALUE

• Satisfied customers are made when KIRLIN Recessed FIXTURES are suggested and installed. Highest efficiency is obtained from Alzak Glass Surfaced Aluminum Reflectors and Lenses which provide proper control of light, ease of maintenance, and an inconspicuous glare-free light source located at the highest point in the room.

Investigate KIRLIN Recessed LIGHTING now to improve your lighting sales and for a good profit source. Write for catalog.

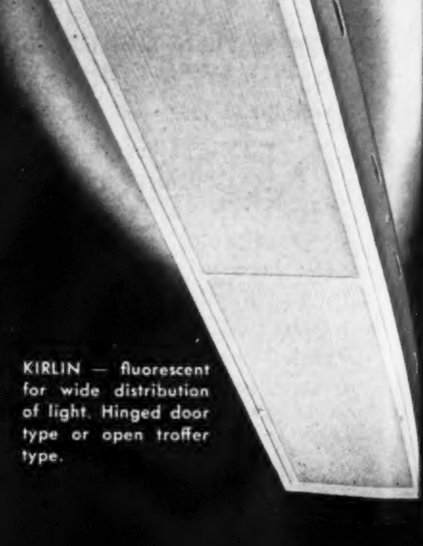
THE KIRLIN COMPANY
3435 East Jefferson St. **Detroit 7, Michigan**

KIRLIN No. 414 — rectangular box 14⅛" x 3¾" x 4" deep, for 40 W. tubular T8 lamp.

KIRLIN No. 4506 — 6" flush recessed exit. No-Guard type has shock-proof glass, No. 4516.

KIRLIN No. 508 — 100 W. Box 8½" x 5½" x 6" deep.

KIRLIN fluorescent Disc-Louver — reduces glare, improves all bare lamps. Shown in troffer.


KIRLIN — fluorescent for wide distribution of light. Hinged door type or open troffer type.

pose of distributing hardware and builders supplies. Since that time the firm has added electrical goods, appliances, paint and plumbing equipment.

Present officers of the company are Robert J. Glock, president, and Herbert J. Davies, secretary and treasurer.

With the aid of its two trucks and service car the firm serves the general area within a 75-mile radius of Johnstown.

WOODWARD HARDWARE COMPANY
CAIRO, ILLINOIS

Established 1862

THE Woodward Hardware Company was born as a Civil War baby. Eighty-five years ago C. R. Woodward arrived in Cairo to build boats for the government to use in the war. Later, after the war had ended, Mr. Woodward converted his business from building boats to selling mill, blacksmith and heavy hardware supplies. In the early 90's he added light hardware. In 1902 Mr. Woodward sold out his interests in the firm and retired to Lockport, New York, and the business was taken over by his employees: William J. Johnston, president; Frank E. Schoembs, vice president; Philip P. Gooding, vice president, and Henry T. Moore, secretary.

Wholesaler 80 YEARS 1867-1947

WOODWARD, WIGHT & CO., LTD.
NEW ORLEANS, LA.

Established 1867

SINCE shipping was one of the principal industries of the city of New Orleans back in 1867, it is not unusual that the founders of this company, Pearl Wight and Thos. J. Woodward, originally started in business as ship chandlers. Today the company has branched out to include electrical equipment, hardware, machinery, welding, plumbing, construction and contractors' supplies. President of the company today is L. C. Deckbar. Vice presidents are E. H. Barrios, R. U. Lea, and W. L. Peters. Secretary is M. F. Hilbert.

Manufacturer 80 YEARS 1867-1947

PARTRICK AND WILKINS CO.
PHILADELPHIA, PA.

Established 1867

MANUFACTURING various types of electrical signaling devices ever since inception of the telegraph, the Partrick and Wilkins Company has been particularly prominent in the development of the annunciator field. Founded by Stephen Chester and James Partrick, the company was later formed into a corporation including C. M. Wilkins and E. W. Wilkins. Warren W. Wilkins, now president of the company, is the son of E. W. Wilkins. Among the products are annunciators; gongs; bells and buzzers; push buttons; fire, burglar, hospital and school signal systems.

Wholesalers 75 YEARS 1872-1947

E. GARNICH & SONS HARDWARE CO.
ASHLAND, WISCONSIN

Established 1872

THE Garnich family for three generations has headed this company which had its beginning in 1872 at Ashland, Wisconsin, as the firm of E. Garnich & Sons Hardware Company which Emil Garnich started as a small retail store. Representing the second generation is E. R. Garnich, present head of the company which is today a wholesaling concern, supplying electrical equipment to the upper half of Wisconsin and the upper peninsula of Michigan. The third generation is represented by A. B. Garnich, who is today vice president of the company.

SHEFFIELD COMPANY
AMERICUS, GEORGIA

Established 1872

PARALLELING the residential, industrial and commercial growth of Georgia has been the history of the Sheffield Co. founded seventy-five years ago by J. W. Sheffield and C. A. Huntington. For many years the company engaged in the retail hardware business. With growing acceptance of electricity for lighting and then for industrial use, the addition of a department for the wholesale distribution of electrical supplies and equipment became necessary. Serving twenty counties in southern Georgia the company is headed today by John W. Sheffield, president, with Frank Sheffield, vice president.

Manufacturer 75 YEARS 1872-1947

EDWARDS AND COMPANY, INC.
NORWALK, CONNECTICUT

Established 1872

THE same progressive spirit that characterized Robert Edwards and Adam Lungen when they established this company in New York City still remains and is capably carried out today by R. Stafford Edwards, president, and grandson of one of the founders. As one of the leaders in the manufacturing of signaling and communication systems, the company offers a wide variety of such systems for home, commerce and industry.

Wholesalers 60 YEARS 1887-1947

LOEB HARDWARE CO.
MONTGOMERY, ALABAMA

Established 1887

MICHEL LOEB and Abe Weil started in business selling general merchandise sixty years ago in Montgomery, Alabama. Back in the early days the company handled wagons and buggies and carriage hardware and later hardware and agri-

"BUILT-IN" SALES APPEAL

Cat. No. BR-15 Chrome with No. R-15 Adjustable Reflector

No. R-348

Plenty of sales-creating eye-appeal is built right into our popular priced lighting fixtures which include easy installation and maintenance features. Your Keystone line sells itself with its beautiful finish and attractive functional design. Display it and you'll sell it . . . *profitably.*

FLUORESCENT
and
INCANDESCENT
LIGHTING FIXTURES

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL

MASS PRODUCED AT
NEW LOW PRICES

No. 920
Antique Copper
or Satin Black

No. 830-C
Colonial Brass

WRITE FOR NEW CATALOG

KEYSTONE ELECTRIC Manufacturing Co.

Essentially Better Lighting

KEYSTONE ELECTRIC MANUFACTURING CO.

Dept. B

2228-36 E. TIOGA STREET, PHILADELPHIA 34, PA.

cultural supplies. It was not until 1932 that the company began to carry electrical equipment, supplying south and central Alabama, west and southwest Georgia, northwest Florida, and part of east Mississippi. Lester M. Loeb and Adolph W. Loeb, sons of the co-founder, are today partners of the Loeb Hardware Company.

PIERCE HARDWARE CO., INC.
TAUNTON, MASSACHUSETTS

Established 1887

THE Pierce Hardware Company has remained in the city of Taunton, Massachusetts, since it first started in business as a retail hardware store in 1887. The company today carries a rather extensive line of electrical equipment including as well paints, sporting goods, heavy hardware and agricultural supplies. President of the company is Bion C. Pierce.

SAGER ELECTRICAL SUPPLY CO.
BOSTON, MASSACHUSETTS

Established 1887

JOE SAGER's first job with the James W. Poole Company was to make customers Poole-conscious and thus snap the store out of an apparent sales inertia. It was hard work, but Joe was soon rewarded. In 1921 he was able to move the Poole store to Congress Street and re-organize the entire operation under the name of the Sager Electrical Supply Co. At this time the electrical Supply business was decidedly lacking in color but Joe Sager tried showmanship—arranging his merchandise for eye-appeal. Hard work plus enthusiasm put the Sager store in the electrical major league.

By 1922 the first Sager branch store opened in Brockton and soon there was another store in Lynn and one on Franklin Street in Boston. This was just the beginning. Branch stores later appeared in many of the large cities throughout Massachusetts. During World War II the company sold or closed all of its branch stores and today the company is confined to one store and warehouse situated at 201 Congress Street.

Wholesalers 55 YEARS 1892-1947

W. BERGMAN CO., INC.
BUFFALO, NEW YORK

Established 1892

NOW being carried on by the third generation under the guidance of Wolf Bergman, president, this company was started fifty-five years ago by W. and S. Bergman to wholesale hardware in only the Buffalo area. Today it has expanded its lines to radio, appliances, lighting and wholesale auto supplies and is serving western New York and northern Pennsylvania. Addition of a new building and two new trucks recently became necessary to handle the increasing volume of sales. Sol J. Levy is vice-president and A. Frank Cowen secretary.

SHEPHERD ELECTRIC COMPANY
BALTIMORE, MARYLAND

Established 1892

WITH activities centered on the city area only when founded, the Shepherd Electric Company's expanded operations today encompass the entire states of Maryland and Virginia. Recently put into effect was the plan to separate the electrical supply business from the appliance business; each having its own building and own sales force. Charles C. Vogel, Jr., president, points out that with this change the company is now ready to increase its sales efforts in the territory served. Robert L. Wilson serves as vice-president and Harvey H. Wilson is secretary-treasurer.

Manufacturers 55 YEARS 1892-1947

CUTLER-HAMMER, INC.
MILWAUKEE, WISCONSIN

Established 1892

FIRST established to manufacture starters, heat regulators and field rheostats, this company was formed by a group of three young men: H. H. Cutler, E. W. Hammer and W. S. Terry. Originally located in Chicago, it was merged later with the American Rheostat Company of Milwaukee and moved its manufacturing activities to that city. At the same time the present name was taken—a name that has become synonymous with quality for a long list of electrical products including safety switches and motor controls. Frank Bacon, one of the founders of the American Rheostat Company, today serves as chairman of the board and G. S. Crane is president.

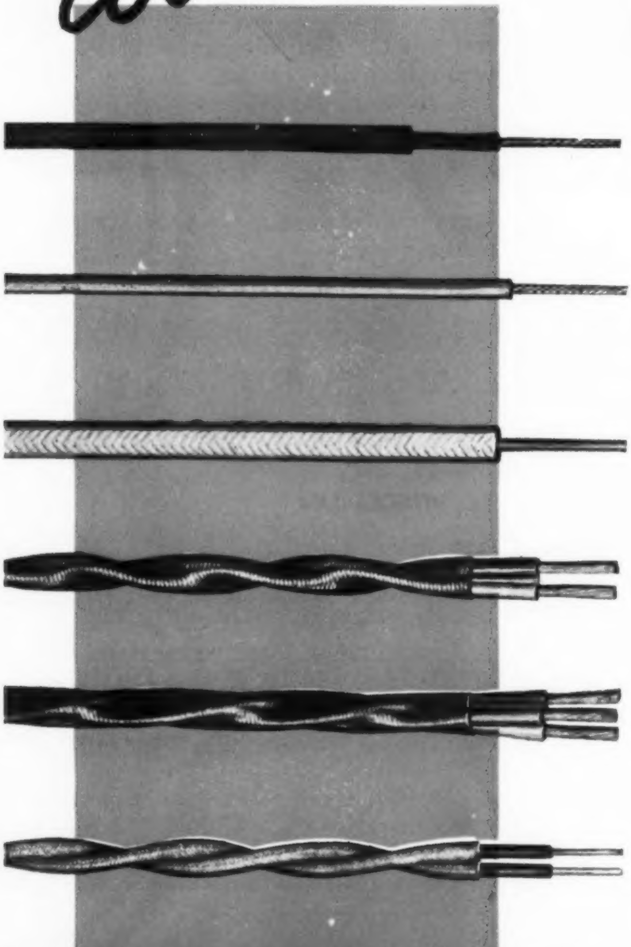
ILSCO COPPER TUBE & PRODUCTS, INC.
CINCINNATI, OHIO

Established 1892

CONSTANTLY adding to its line of electrical connectors, lugs, fuse clips, sheet terminals, clamps and other electrical distribution products, Ilsco has set a fine record of achievement since its founding in 1892. Today the company is headed by Andrew H. Stubbers, president, and has just completed a program of plant expansion to take care of its ever-increasing sales.

The BEST in ASBESTOS covered wire

RADIBESTOS
Wire



The best wire for the job—That's what you get when you select RADIBESTOS Asbestos Covered WIRE — solid or stranded — for your use.

Why? Because we specialize in making asbestos covered wire only—and have made it our business to see that RADIBESTOS WIRE is unexcelled in quality, appearance and durability.

Our high manufacturing standards and careful inspection safeguard RADIBESTOS WIRE quality and guarantee its uniformity.

Tell us your needs and
let us submit samples
and quotations.

LOOK FOR
RADIBESTOS
Wire
ON THE SPOOL

RADIX WIRE Company
2800 EAST 55TH STREET · CLEVELAND, OHIO

WARD LEONARD ELECTRIC COMPANY
MOUNT VERNON, NEW YORK

Established 1892

IT WAS just fifty-five years ago that H. Ward Leonard founded the company that bears his name. Prominent in the field of electrical control equipment, the Ward Leonard Electric Company is now concentrating its efforts, under the leadership of President D. J. Burns, toward the development of new and more efficient devices for controlling electrical power as well as modernizing existing control products. Included in their present activities is an expansion program of sales offices.

Wholesalers 50 YEARS 1897-1947

AMERICAN ELECTRIC COMPANY
ST. JOSEPH, MISSOURI

Established 1897

ORIGINALLY established as an electrical contracting firm, the American Electric Company soon gave up the contracting business and expanded into electrical wholesaling, serving the territories surrounding St. Joseph, Missouri, and Wichita, Kansas. Aggressive efforts have enabled the company to successfully extend its coverage to the entire states of Kansas and Missouri, as well as parts of Iowa, Nebraska, and Oklahoma. President Luther E. Reid advises that the company has added recently another 5-story building in St. Joseph and has started a new building of 30,000 sq. ft. in Wichita; expenditures for present expansion will come to about $130,000.00. Russell A. Peck is vice-president and sales manager and Rudolph Falkenbach is secretary and treasurer.

F. H. SCHNEIDER AND SONS, INC.
LAKE PROVIDENCE, LOUISIANA

Established 1897

FIRST began operations as a small retail business under the name of Maguire and Schneider, but as volume of sales grew it was developed into one of the first electrical wholesaling houses in this section and now covers North Louisiana, South Arkansas and West Mississippi. Current plans call for a new building to house the Electronic Division—a field in which the company is now successfully operating. Mrs. Anna D. Schneider now serves as president, F. H. Schneider, Jr., is vice-president, and E. D. Schneider is secretary and general manager.

GORKE ELECTRIC COMPANY, INC.
SYRACUSE, N. Y.

Established 1897

STARTING in 1897 as a paint wholesaler, the late H. J. Gorke, founder of the company, soon foresaw the tremendous potential of the electrical industry and, switching his objectives, devoted his energies to building up the electrical wholesaling organization that still bears his name. The operation was at first confined to the Syracuse area only, but now includes 18 counties in central New York state. K. S. Gorke, president, keeps a scrap book in which are pasted some of the 1897 handwritten invoices from Crouse-Hinds, Pass and Seymour and other well known electrical manufacturing concerns. Recently the business has been incorporated to raise additional working capital with Gertrude T. Gorke as vice-president, and Bertha F. Adams, secretary.

Manufacturers 50 YEARS 1897-1947

CROUSE-HINDS COMPANY
SYRACUSE, NEW YORK

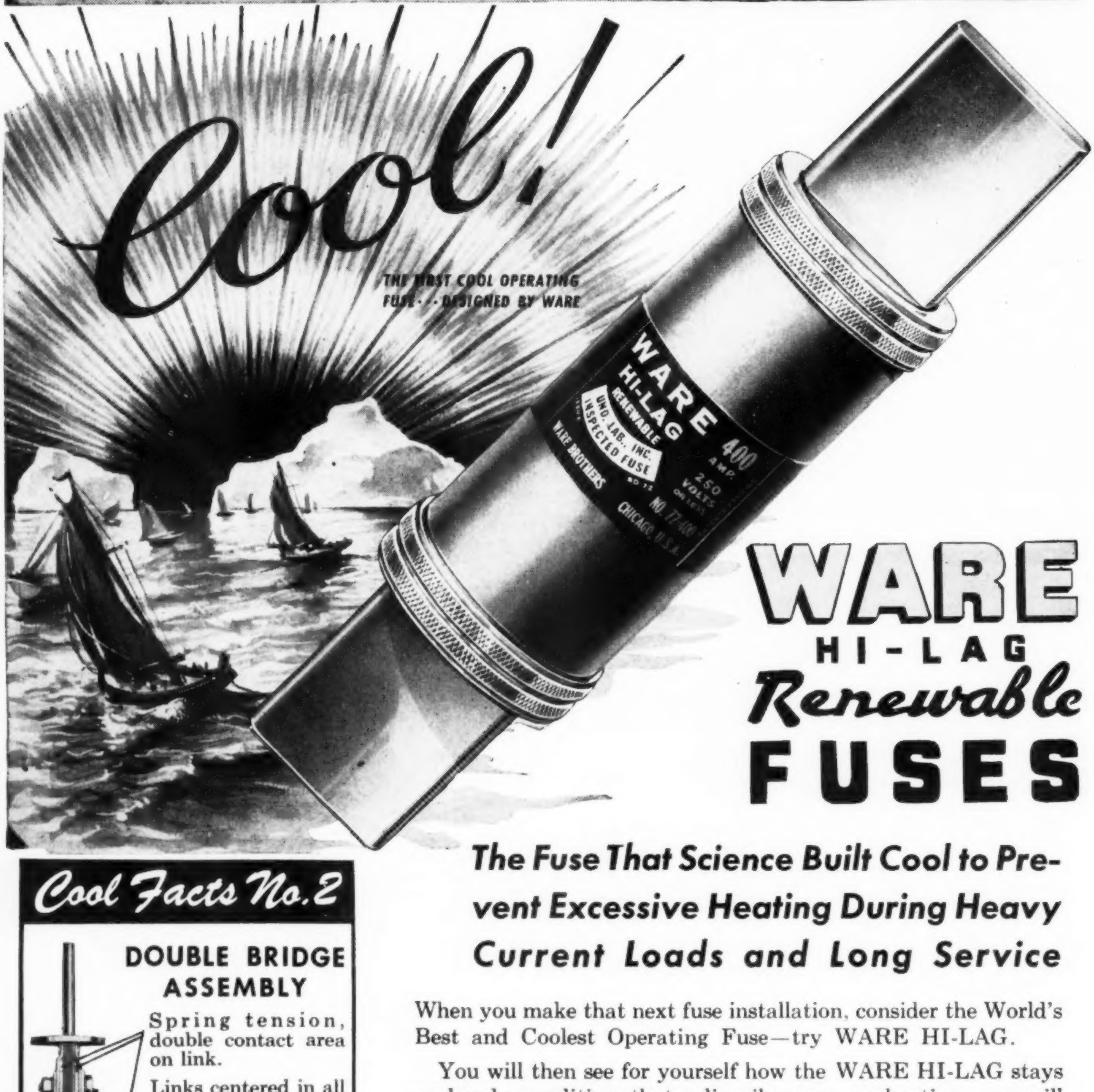
Established 1897

HUNTINGTON B. CROUSE and Jesse L. Hinds signed partnership papers on January 18, 1897, and the Crouse-Hinds Electric Company was born. Modest quarters, consisting of one-half the second floor, were rented at 500 East Water Street in Syracuse. Monthly rent including heat and power was $33.33. In 1897 electric street railways were going strong and electric interurban lines looked promising. The newly-joined partners manufactured and sold a trolley car headlight. This was the beginning of the company's participation in the lighting field.

In 1903 the partnership was dissolved and was replaced by a corporate structure. In this change the word "electric" was dropped, making the new name simply "Crouse-Hinds Company." Around 1906 the company began manufacturing condulets—a conduit fitting designed for exposed work. The name condulets derived its name from the contraction of "conduit" and "outlet."

In 1906 the tungsten filament incandescent lamp came into being. Crouse-Hinds immediately began to offer a line of reflectors for this new lamp. Soon after that the company started producing lights for outdoors, known today as floodlights. In this, its fiftieth anniversary year, the company's objectives are still what they have been through the years—to strive for a continued frank relationship with all employees; to make a good product better; and to deal fairly and honestly with all. William L. Hinds is president of the company today. William Cornell Blanding is treasurer. Albert F. Hills is vice president and general sales manager.

LOOK TO WARE HI-LAG FUSE FOR PRODUCTION PROGRESS


Cool!
THE FIRST COOL OPERATING FUSE ··· DESIGNED BY WARE
WARE
HI-LAG
RENEWABLE
UND. LAB. INC.
INSPECTED FUSE
WARE BROTHERS
400
AMP
250
VOLTS
OR LESS
NO. 77-400
CHICAGO, U.S.A.

WARE
HI-LAG
Renewable
FUSES

The Fuse That Science Built Cool to Prevent Excessive Heating During Heavy Current Loads and Long Service

When you make that next fuse installation, consider the World's Best and Coolest Operating Fuse—try WARE HI-LAG.

You will then see for yourself how the WARE HI-LAG stays cool under conditions that ordinarily cause overheating—you will see why it's good business to standardize on a product that ends costly delays—needless production shut downs and interruptions.

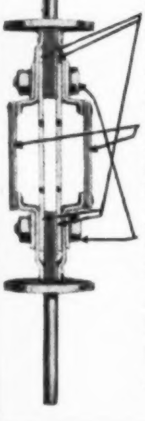
There's higher lag for motor starting overloads—stronger lag for operating current surges—lower contact resistance, reduced heating and larger and stronger terminal connections.

The double-bridge assembly at left is another cool construction feature, helping to lower contact resistance and excessive heating.

Write for Brochure giving details of all the COOL FACTS, sizes and prices.

Cool Facts No. 2

DOUBLE BRIDGE ASSEMBLY



Spring tension, double contact area on link.

Links centered in all casings.

Double Fibre Bridge for Alignment and Strength.

Screws Locked—Only one wrench needed.

Insert either end in Casing. Minimum of parts.

APPROVED BY UNDERWRITERS' LABORATORIES

WARE *Brothers* 4450 W. LAKE ST.·· CHICAGO 24, ILL.

CURTIS LIGHTING, INC.
CHICAGO, ILLINOIS

Established 1897

EARLY in 1897 Augustus D. Curtis and E. H. Haines formed the National X-Ray Reflector Co. to produce silvered mirror show window reflectors so designed as to provide improved quality as well as better distribution of electric light. This objective has been the guiding principle of the company's operation from the very start and is today one of the foremost considerations in the designing of the many types of lighting units that are manufactured by the company, now known as Curtis Lighting, Inc. Darwin Curtis, son of the founder, is chairman of the board. M. C. Wilt is president. G. T. Morrow is vice-president in charge of sales, and L. N. West is secretary-treasurer.

THE SWARTZBAUGH MANUFACTURING CO.
TOLEDO, OHIO

Established 1897

THE company was established in Toledo, Ohio, about fifty years ago in a small shop. Although through the years it has remained in practically the same location as the day it started, the plant it now occupies covers a large area. One of the first products manufactured by this company was a steam cooker. Later fireless cookers were added to its line of appliances and when electricity became generally available, the electric cooker similar to the fireless cooker, was developed. The president of the company is C. E. Swartzbaugh, son of the founder. Since the passing of J. B. Swartzbaugh, Roy Baunach is sales manager. William Von Behren is engineer in charge of production and development.

45 YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

Wholesalers 45 YEARS 1902-1947

THE TOLEDO ELECTRIC SALES COMPANY
TOLEDO, OHIO

Established 1902

MOTOR repairs and electrical contracting were the specialties of this company from 1902 to 1912 when the repair and contracting business were replaced by an exclusive electrical wholesaling operation. In the past most efforts were concentrated on the field of electrical supplies for electrical contractors and industrial plants, but now, under the direction of F. W. Kaufman, president, excellent facilities have been set up to handle a complete line of traffic appliances.

FRANK C. TEAL COMPANY
DETROIT, MICHIGAN

Established 1902

COMING to Detroit in 1889, Frank C. Teal was first employed by the Brush Electric Light Company to introduce electric motor power. With the experience thus gained, Mr. Teal entered the electrical contracting business in 1891 and remained until 1902 when he purchased the Michigan Electric Co. and moved to 425 Bates St., where the company has been located for the last 45 years. In 1944 William T. Hoffman was elected president and treasurer with LeRoy Dahlberg secretary. Members of the firm are Frank C. Teal, Jr., Mrs. Robert Whiteley, A. B. Pfleiderer and Mrs. Belle Teal. When first established the Teal Co. served the city of Detroit only but now covers the state of Michigan.

IDAHO HARDWARE AND PLUMBING CO., LTD.
BOISE, IDAHO

Established 1902

FORTY-FIVE years ago the Idaho Hardware and Plumbing Co., Ltd., was founded by S. T. Davis and R. K. Davis to wholesale electrical, hardware, plumbing and mining supplies in a small part of southern Idaho. Now with R. C. Davis, president, R. J. Davis, vice-president and Varina D. Stolle, secretary and treasurer, the company is planning to spend around $80,000.00 to improve warehouse, office and lighting equipment in order to satisfactorily han-

The 2nd International Lighting Exposition

Announces

MERIT AWARD CERTIFICATES

for Electrical Contractors ... Electrical Wholesalers ...
Architects ... Utility Lighting Men ... Consulting Engineers

on the Subject

"What Planned Lighting Can Do"

Offering Merit Award Certificates for Planned and Engineered Lighting Installations Completed in 1946 and 1947, plus 12 Gold Seal Awards of $100 each. } **Closing Date: Sunday, August 31, 1947**

DURING this year or last, you have doubtless had a part in the designing, planning or production of at least one industrial or commercial lighting or floodlighting installation that has proved exceptionally effective ... an outstanding example of the benefits to be derived from lighting properly planned and installed.

It is to direct industry-wide attention to such achievements ... to stimulate thinking along similar lines among the thousands who will attend the Exposition, that this competition on "What Planned Lighting Can Do" is sponsored by the 2nd International Lighting Exposition and Conference.

For you, this represents a unique opportunity to contribute to the knowledge of better seeing through better lighting. Further, thousands will see your entry on display at the Exposition and reported in the trade magazines, and thus you and your company will gain nation-wide recognition for your accomplishment.

4 separate competitions with opportunities for joint entries

There will be separate competitions for each of the following groups:

1. Electrical Contractors
2. Utility Lighting Representatives
3. Architects and Consulting Engineers
4. Wholesalers' Lighting Specialists and Salesmen

Thus, for example, Electrical Contractors' entries will compete only with submittals from other Electrical Contractors, Utility Men's entries will compete only with other Utility Lighting representatives' entries, etc. In addition, where the installation is the cooperative work of men in two or more of the above classifications, the entry may be submitted by the two or more involved, and entered in each of the applicable classifications.

Merit Awards and Gold Seal Cash Awards

From the entries received, the Board of Judges will select those which are judged eligible for Merit Award Certificates. All of these will be placed on exhibit at the Exposition. In addition, the judges will select the twelve judged best, three from each classification, which will receive Gold Seal Merit Awards of $100 each ... a total of $1200 in cash prizes. Decision of the Board of Judges is final.

Send for Official Entry Blank and Rule Book

For an official entry blank and a copy of the rules, write MERIT AWARD COMMITTEE, Room 818, 326 West Madison Street, Chicago 6, Illinois.

"Plan Tomorrow's Lighting Today" *at the* 2nd INTERNATIONAL LIGHTING EXPOSITION and CONFERENCE
Chicago, Nov. 3-7, 1947, Stevens Hotel. *Sponsored by INDUSTRIAL and COMMERCIAL LIGHTING EQUIPMENT SECTION of the* **National Electrical Manufacturers Association**

2283

2nd International Lighting Exposition and conference
PLAN TOMORROW'S LIGHTING TODAY
STEVENS HOTEL Chicago Nov. 3-7
NEMA

The above Announcement is published in this Magazine as a Contribution to the Advancement of "PLANNED LIGHTING" by

BENJAMIN
TRADE MARK

makers of Industrial
Lighting Equipment and *Floodlights*

Distributed Exclusively through Electrical Wholesalers. BENJAMIN ELECTRIC MFG. CO., Des Plaines, Illinois dle the volume of business now being enjoyed by the company. Its sales activities now extend into eastern Oregon.

Manufacturers 45 YEARS 1902-1947

BULLDOG ELECTRIC PRODUCTS CO.
DETROIT, MICHIGAN

Established 1902

IN 1902 when America's era of great industrial expansion was just getting under way, this concern began business under the name of the Mutual Electric & Machine Company, with a 15-man plant in Wheeling, West Virginia, manufacturing electrical control and distribution apparatus. Its principal market was the steel industry of the Alleghany Valley.

In 1915, the company moved to the Detroit plant at Fort and Fourth Streets. There it employed seventy-five men. By 1919 the company had outgrown this one plant, and overflowed into another at Fourth and Porter Streets. Here employment rose to one hundred and fifty. A few years later a new location was purchased at Joseph Campau Avenue and Dunn Road, comprising eight acres of land and buildings.

Now directing the company are William H. Frank, who succeeded his father, H. J. L. Frank, as president of the company upon the latter's death in 1939; M. C. Emery, executive vice-president; and J. J. Mitchell, vice-president in charge of sales.

EDWIN F. GUTH COMPANY
ST. LOUIS, MISSOURI

Established 1902

SINCE 1902, the Guth Company has pioneered in official lighting equipment designed to employ successively the carbon filament lamp, gem and tantalum lamps, pressed wire tungsten and drawn tungsten lamps. With forty-five years of progressive development in the lighting art to its credit, the company today is proud of its lines of fluorescent and incandescent lighting equipment. Recently its custom-built fixture department has moved to a separate auxiliary plant, so as to make room for increased fluorescent production as well as to improve facilities for the custom-built operations. The company is managed by the following: E. F. Guth, Sr., founder; E. F. Guth, Jr., president.

OVERBAGH & AYRES MFG. CO.
CHICAGO, ILLINOIS

Established 1902

FRANKLIN Overbagh and Frank E. Ayres started this business forty-five years ago in Chicago at 152 Fifth Avenue to engage in the manufacturing of lighting equipment. The company has and will continue to produce industrial and commercial lighting equipment, both the incandescent and fluorescent types. Present plans include an increased use of plastics in the company's line of fluorescent units and in the incandescent line, Overbagh & Ayres is working on an insect destroyer lamp.

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Annual
Anniversary
Review

YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

Wholesalers 40 YEARS 1907-1947

BUFFALO INCANDESCENT LIGHT CO.
BUFFALO, N. Y.

Established 1907

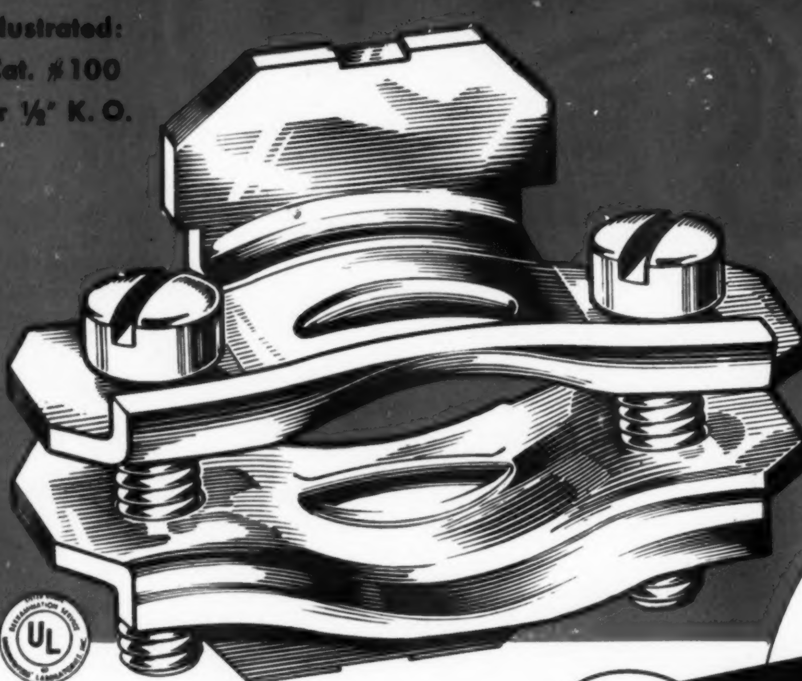
FORTY years of electrical wholesaling is the record of the Buffalo Incandescent Light Co., Inc. of Buffalo, N. Y. When Abraham Kirschenbaum and Samuel Kirschenbaum started their wholesaling business in 1907, the operating territory was limited to the city of Buffalo. Today the company serves not only Buffalo but the eight surrounding counties. The officers today are: Harold Kirschenbaum, president; Elmer I. Levy and Norbert Block.

ELECTRIC WHOLESALE SUPPLY CO.
JACKSON, MICHIGAN

Established 1907

THE Electric Wholesale Supply Company was established in 1907 by W. D. Crandall and E. G. Nixon to engage in the business of electrical contracting. However, over the span of

Illustrated:
Cat. #100
for ½" K. O.



TOMIC

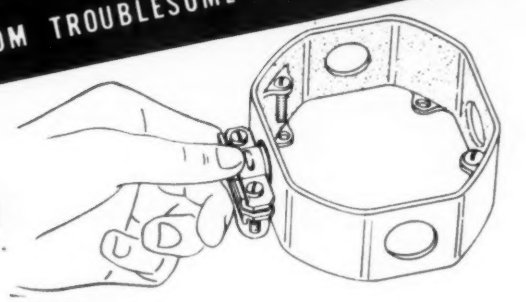
non-metallic

CABLE CONNECTO

ONE TWO THREE and you're *FREE*

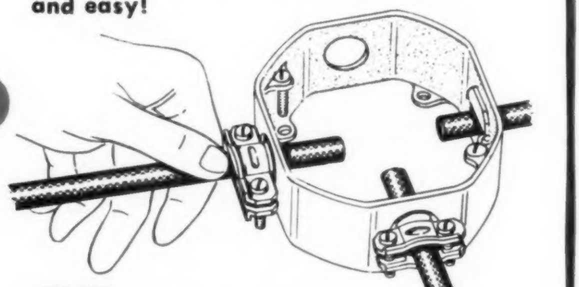
FROM TROUBLESOME CUMBERSOME LOCKNUT

1



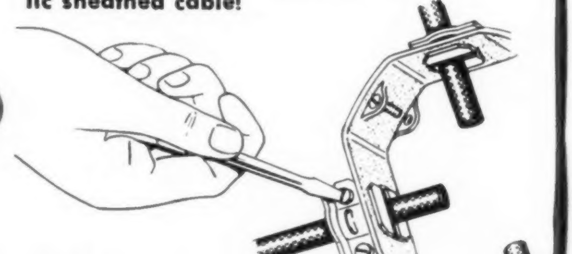
TIP a Tomic cable connector into the hole from the outside. Fits in quick and easy!

2



SLIP the cable through! Will handle both the new and old type non-metallic sheathed cable!

3



FLIP the screws tight—and the job is done right! Exclusive locking feature holds connector securely!

So Simple it's just a matter of tipping in the connector from the *outside* —— —— slipping in the cable—and flipping on the screws!

So Quick it takes just 10 seconds flat! No locknuts to fumble with—no loose parts to lose!

So Popular that millions have already been sold! They've been approved by jobbers and contractors—proved by men on the job!

So Thrifty that they're priced less than any other quality connector on the market! Saves you money right from the start!

So Dependable that the ½" size has passed the Underwriter Laboratory test with both the new and old-type non-metallic sheathed cable!

WE *CAN* DELIVER!

You rush your order IN—we'll rush your order OUT! We have a production capacity of millions per month! Cat. #100 for ½" K.O.—Cat. #200 for ¾" K.O.

HEADING FOR ATLANTIC CITY? Look us up!

Tomic Sales & Engineering Co.
4864 Woodward Ave. • Detroit 1, Michigan

years the nature of its business gradually changed until it finally sold goods wholesale only. At first the Electric Wholesale Supply Co. covered only the city of Jackson. Today its territory includes eight Southern Michigan counties. The executives of the company today are A. P. Jensen, B. M. Peek, Keith Jensen and Paul Jensen.

C. C. DAVIS ELECTRIC CO.
PHILADELPHIA, PENNSYLVANIA

Established 1907

C. C. DAVIS, owner of C. C. Davis Electric Co. of Philadelphia, is celebrating the fortieth anniversary of his electrical wholesaling business.

Mr. Davis started his business in 1907 to stock and distribute electrical supplies in the city of Philadelphia and the territory within a 100 mile radius. From 1907 to 1912, in addition to its wholesale business, the company represented the Detroit Fuse & Mfg. Co. in the Philadelphia area. Today the latter Detroit concern is known as the Square D Company.

During the days of the NRA, Mr. Davis was one of eleven National members and vice chairman of the Code Authority for the Electrical Wholesale Trade. He was also a member of the Trade Practice Committee.

GLOBE ELECTRIC CO., INC.
SEATTLE, WASHINGTON

Established 1907

LIFE began forty years ago for the Globe Electric Co., Inc., Seattle, Washington. At that time, D. U. Chamberlin and R. G. Reiniger founded the company to wholesale electrical supplies. The firm is still going strong and so are its founders. The two men started out covering the city of Seattle and its vicinity. Today, Globe Electric Co. covers the State of Washington with the exception of Portland and Spokane. Mr. Chamberlin is president of the company and Mr. Reiniger is secretary and treasurer. Globe Electric Co. would like to erect a new building but intends to hold off with its plans until costs come down.

HOUSE-HASSON HARDWARE CO.
KNOXVILLE, TENNESSEE

Established 1907

BACK In 1907, when Charles S. Hasson and Sam C. House organized the House-Hasson Hardware Co. to sell electrical supplies, five salesmen were employed to cover Eastern Tennessee, Western North Carolina, Southeast Kentucky, Southwest Virginia and North Georgia.

From time to time during its first forty years the company has added other lines to its business until today, it handles appliances, plumbing, heating and furniture in addition to electrical equipment. During this same period, its sales staff has increased from 5 men to a staff of 23 traveling representatives and three house salesmen. House-Hasson still covers its original territory but has added Northeastern Alabama.

The electric appliance department is operated separately employing four specialty salesmen and four servicemen who operate a centralized service department. Executives at House-Hasson today are: Charles S. Hasson, president; J. W. Hasson, executive vice president; C. C. Minnich, secretary; Herbert W. Webster, treasurer. Future plans of the company include a new warehouse with elevator and three new trucks.

HINSDILL ELECTRIC CO.
TROY, NEW YORK

Established 1907

THE Hinsdill Electric Company of Troy, New York was founded in 1907 by Charles A. Hinsdill and A. R. Hinsdill. From its very start the company distributed electrical supplies in Troy, New York and the area within 100 miles around the city. Today, Hinsdill Electric Co. has expanded and in some lines it is able to furnish a complete service from manufacturing to wholesaling and contracting. In addition to its wholesale business, Hinsdill Electric Co. is a manufacturer of storage batteries, lighting fixtures and operates an electrical contracting division. Present officers are: Charles A. Hinsdill, president; Roger C. Hinsdill, vice president; A. R. Hinsdill, treasurer; E. H. Hinsdill, secretary.

MURPHY SUPPLY CO.
GREEN BAY, WISCONSIN

Established 1907

A FORTIETH anniversary is being celebrated this year by Murphy Supply Company of Green Bay, Wisconsin. The company was started in 1907 by E. N. Murphy to sell electrical supplies within a 50 mile radius of Green Bay. Today, in addition to electrical equipment, Murphy Supply Co. sells plumbing, heating and mill supplies, and serves an area within a 100 mile radius of Green Bay. Its officers at present are: E. F. Murphy, manager, Norris Murphy, Maxwell D. Murphy and Adelaide M. Bills. Future plans of the company include the expanding of its appliance department.

KUBEC ELECTRIC CO.
CHICAGO, ILLINOIS

Established 1907

IN 1907, twelve years after he landed in New York, coming from Bohemia, August Kubec founded the Electrical Construction Co. which later became the Kubec Electric Company in Chicago.

Because of Mr. Kubec's thorough understanding of what he did and his resourcefulness, he built up a large following of customers and a business record of which the company is very proud.

When the Stevens Hotel in Chicago was built

Williams Fluorescent Fixtures

Commercial -
Industrial - Strip
Show Window -
Kitchen

Model 1445H
Equal spaced lamps
give even light distribution

Model A404H
Hinged end plates
for easy relamping

Model VB403
Can be adjusted
to any angle

WILLIAMS Commercial and Industrial Fluorescent Fixtures are designed to meet most exacting demands. They are built to accommodate two, three, and four forty-watt lamps and utilize the latest approved electrical components and high power factor ballasts. All models can be connected in continuous rows and are designed to be pendent or flush mounted.

- **Williams U.R.C. Type Fixtures** can be supplied with either ribbed glass or steel egg crate louver bottom shields. Hinged glass side panels swing safely out of the way to facilitate maintenance.
- **Williams Commercial Fixtures** are smartly styled to blend with any interior and feature embossed end plates hinged to allow easy relamping.
- **Williams Industrial Fixtures** are exceptionally sturdy due to their unique bridge type bracing. The Industrial Models are equipped with Williams Lampholders made of laminated bakelite which practically eliminate lampholder breakage in shipment or use.

**DISTRIBUTED
BY WHOLESALERS
ONLY**

H. E. WILLIAMS PRODUCTS CO.

CARTHAGE, MISSOURI, U. S. A.

Kubec Electric Company not only supplied 23 carloads of conduit for the job but went all the way to Czechoslovakia for glass fixtures. Mr. Kubec dug up some molds for a lot of fancy bowls and had some of them specially made up. The contractors on the Chicago South Water Market and Pure Oil Building obtained most of their supplies from Kubec as did those who equipped the Sky-Ride at the Century of Progress Exposition.

Since the passing of Mr. Kubec last July the business has continued to operate along the lines which he established, the employees, many of whom have been with the company twenty years or longer, operating the business.

Present officers of Kubec Electric Company are: G. O. Kubec, president and treasurer; J. Hemnes, vice president, and N. C. Maxham, secretary.

THE PROTECTIVE ELECTRICAL SUPPLY CO.
FORT WAYNE, INDIANA

Established 1907

ORIGINALLY starting as a manufacturer of protective cable terminals, this company turned to electrical wholesaling early in its career, serving the rapidly growing city of Fort Wayne. Today it has branched out its operations into northern and central Indiana, the northwestern section of Ohio and lower Michigan. M. B. Larimer, one of the founders along with E. M. Popp, is chairman of the board; Mr. Popp is president, H. W. Henline is vice president and sales manager; A. C. Spiegel, secretary, and Thomas G. Popp, treasurer.

SAVIERS ELECTRICAL PRODUCTS CORP.
RENO, NEVADA

Established 1907

WHOLESALING wall paper and paints was the first purpose of this company when it was organized forty years ago but subsequently electrical products and appliances were added. Operations covered the state of Nevada, but addition of a new building, new warehousing equipment and eight new delivery trucks have enabled the company to expand its territory into northeastern California and southern Oregon. Claude E. Saviers, president, was one of the original founders; Joe Bass is vice president; Roy Chanslor, secretary, and Margaret Baker, treasurer. Thirty-five full line exclusive dealers and about one hundred and thirty-five non-franchised dealers are served by the company.

THE SPANN HARDWARE COMPANY
MOSS POINT, MISSISSIPPI

Established 1907

B. D. SPANN opened a small retail hardware store at Moss Point, Mississippi, in 1907. The company continued as a retail store until 1917 when a partnership was formed. During the years the company expanded, taking on hardware, builders supplies, electrical-radio-plumbing supplies and automobile accessories. In 1935 a new warehouse was built and four years later a new main store building was acquired. Today the company sells wholesale exclusively, supplying the southern part of Mississippi. B. D. Spann is president of the company and C. S. Beardslee is secretary-treasurer.

UNITED ELECTRIC SUPPLY CO.
ST. LOUIS, MISSOURI

Established 1907

THE story of the United Electric Supply Company is one of continuous growth. When the company was founded in 1907 by Hy Sikemeir and C. E. Vail, it occupied but one floor, 25 by 70 feet, in a building at 222 Pine Street. One year later the company was moved to 1531 Pine Street where it had a space 50 feet by 50 feet. Today, in its spacious headquarters at 1901 North Florissant Avenue, a fixture display sample room with over three hundred outlets is featured. In 1909 United Electric Supply Co. bought out the Ewing Merkle Electric Co. Present officers at United Electric Supply Co. are C. E. Vail and C. C. Vail.

JOHNSON ELECTRIC SUPPLY CO.
CINCINNATI, OHIO

Established 1907

MANY interesting events are included in the records of the Johnson Electric Supply Co. which celebrates its 40th anniversary this year. Claude W. Johnson and John Kennedy formed the Johnson-Kennedy Electric Co., Inc., on June 1, 1907, at 244 East Fifth Street, Cincinnati.

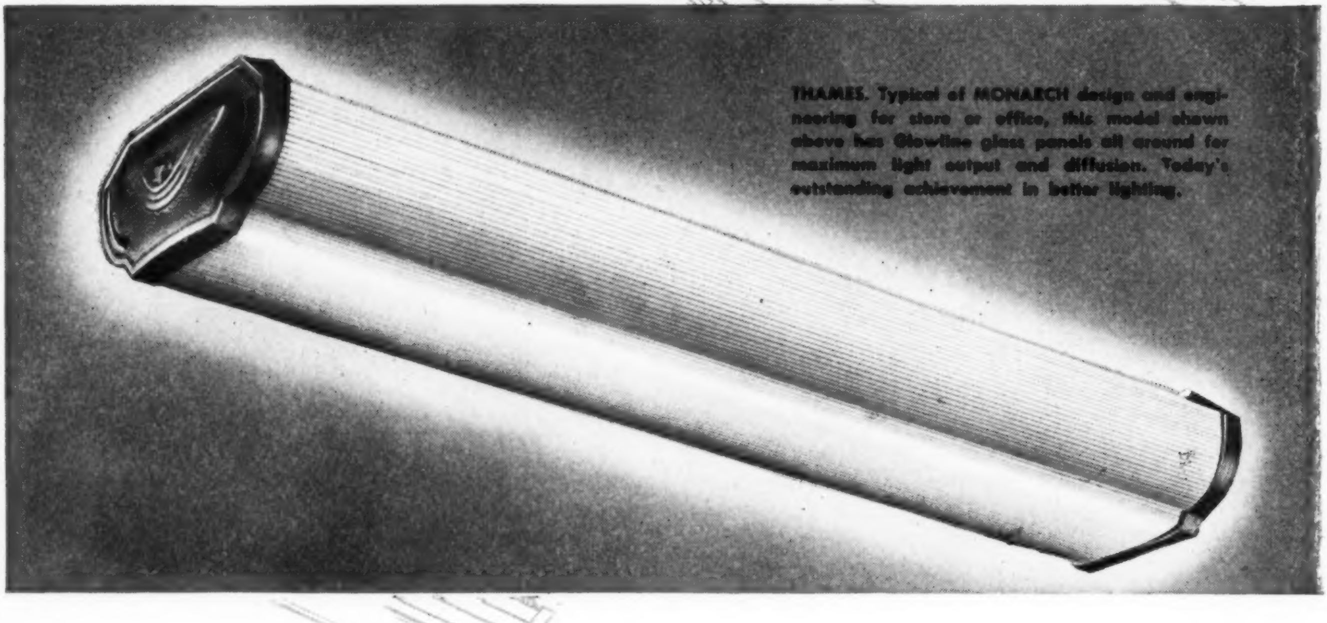
It was the first company in Cincinnati to handle tantalum lamps. The Johnson Electric Supply Co. is justifiably proud of its past president, Claude W. Johnson, who died very suddenly last fall. Mr. Johnson was one of Northern Kentucky's leading citizens, an active worker in community activities and a respected leader in the electrical wholesaling industry.

The first two employees of the company are still with it. Victor M. Sinclair, who was the first employee, is now vice president and purchasing agent. Miss Emilie A. Schuchardt, the second employee of the company, is now its secretary. Other officers today include Claude W. Johnson, Jr., president and treasurer, and Willard B. George, sales manager.

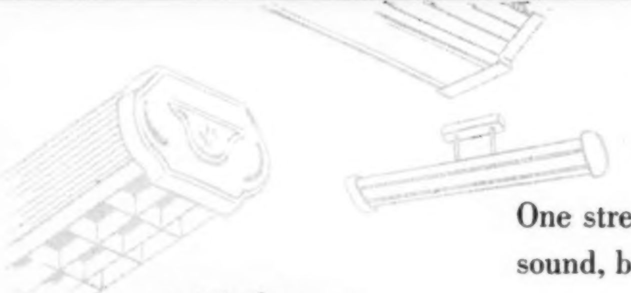
On April 1, 1913, Claude W. Johnson bought out the interests of John Kennedy and incorporated the company as the Johnson Electric Supply Co. In 1920 the company purchased a warehouse at 331 Main Street into which it gradually moved during the following three years. In 1928 the adjoining building was purchased and is now the sales office.

Originally the territory covered consisted merely of greater Cincinnati and Kenton and Campbell counties in Kentucky. Today the Johnson Electric Supply Co. serves an area embracing roughly 60 percent of Kentucky, 15 counties in the Southwestern corner of

Greater Monarch Values in '47



THAMES. Typical of MONARCH design and engineering for store or office, this model shown above has Glowline glass panels all around for maximum light output and diffusion. Today's outstanding achievement in better lighting.



There are three classes of Fluorescent Lighting Fixtures in today's competitive market.

One stresses QUALITY, soft pedals PRICE. Sales are sound, but limited.

The second frankly competes on PRICES. Sales are better; satisfaction, precarious.

The third is MONARCH! Rigid QUALITY control has not blinded us to the fact that LOW PRICES are also a vital ingredient of SALES . . . don't you want the MONARCH distribution plan?

Monarch
MONARCH LIGHTING FIXTURE CORP., 81 PALISADE AVE., YONKERS, N. Y.

Send for your copy of MONARCH's new full-line Catalog. A masterpiece of presentation for dealer or customer. Includes all specifications and list prices.

Monarch

AMERICA'S FINEST

LIGHTING FIXTURES

MONARCH LIGHTING FIXTURE CORP., 81 PALISADE AVE., YONKERS, N. Y.

Ohio and eleven counties in the Southeast corner of Indiana.

Recently the Johnson Electric Supply has completed painting, rearranging and relighting its general offices and sales rooms. It has recently adopted the Remington-Rand Kardex System for maintaining a perpetual visible inventory record. Seven of its salesmen have received new cars and the company still has on order three more salesman's cars and two delivery trucks.

In regard to its future program, Claude W. Johnson, Jr., says, "Our present management intends to carry on the aggressive policy of our past president to the best of our ability and expand horizontally and vertically as our business permits."

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YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

Wholesalers 35 YEARS 1912-1947

CAPITAL CITY PAPER CO., INC.
SPRINGFIELD, ILLINOIS

Established 1912

CORWINE E. ROACH founded this company thirty-five years ago for the express purpose of wholesaling paper and paper products. Later he found it desirable to add dry goods and notions and then a complete line of electrical appliances, radios and industrial lighting. C. E. Roach is president, S. B. Gaines, executive vice president, C. C. Hoogland, vice president and S. S. Thayer, secretary-treasurer. Plans for a modern office and warehouse have already been drawn up and an expenditure of about $50,000.00 will be made on these improvements. The city of Springfield and the surrounding territory as far as 200 miles are covered by the company's large sales force.

THE FRANKELITE COMPANY
CLEVELAND, OHIO

Established 1912

THIRTY-FIVE years ago the Frankelite Co. was founded by Harry and David Frankel to distribute gas and electrical supplies in the city of Cleveland. To these later were added a full line of electrical appliances and residential and industrial lighting fixtures. David Frankel is president; E. J. Rueth, vice president; and I. R. Frankel, treasurer. The territory now covered intensively consists of northern Ohio, with four new trucks constantly on the move to provide prompt service.

CORINTH MACHINERY COMPANY
CORINTH, MISSISSIPPI

Established 1912

HANDLING a full line of electrical and mill supplies and machinery, the Corinth Machinery Co. has been in operation for thirty-five years. It took over the equipment and business of the Corinth Engine and Boiler Works in 1912. According to P. T. Jones, president, the territory now covered includes Northern Mississippi and Alabama and Western Tennessee. The company's facilities for warehousing are now being enlarged and new lighting is being installed throughout. Jameson C. Jones is vice president, secretary and treasurer.

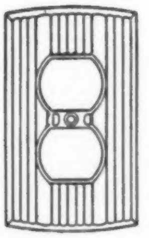
H. N. CROWDER, JR. COMPANY
ALLENTOWN, PENNSYLVANIA

Established 1912

FROM the time of its founding by Harry N. Crowder, Jr., in Eastern Pennsylvania, this company has specialized in electrical wholesaling. With two new buildings and seven trucks the company is able to render twenty-four hour service to industrial plants and has recently added such items as ball bearings, transmission equipment and conveying equipment. Lighting equipment is another major factor in the company's operation. Covering an area within a radius of about 50 miles, the concern reports that a program for expansion has been recently completed. Other officers are Charles F. Crowder, vice president, W. W. Deegan, treasurer, and E. W. Kuhnsman, secretary.

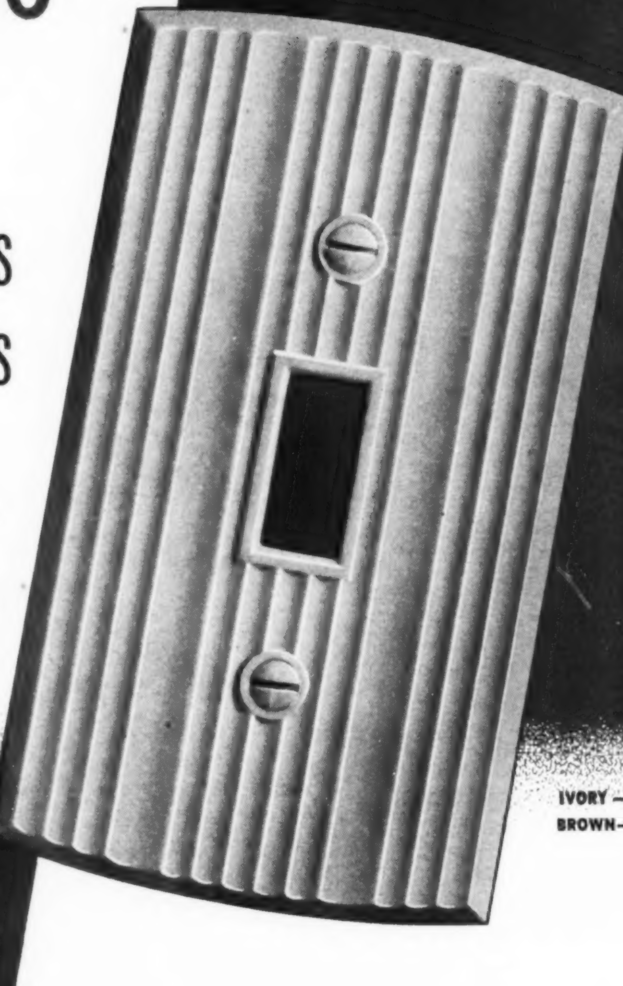
ROGERS PLASTIC *Presents*

SUPER DELUXE Switch Plates to meet ALL your requirements

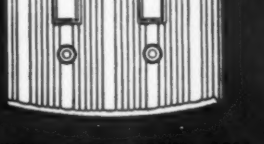


SOLD ONLY THROUGH WHOLESALE DISTRIBUTORS FOR YOUR CONVENIENCE

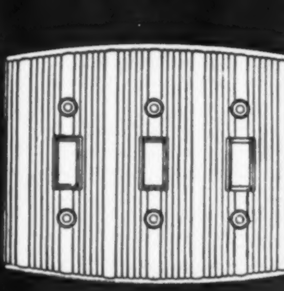
IVORY — 1051 BROWN — 1251



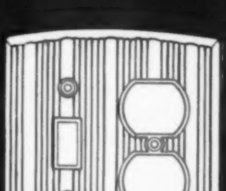
IVORY — 1021
BROWN — 1221



IVORY — 1022 BROWN — 1222



IVORY — 1023 BROWN — 1223



IVORY — 1024 BROWN — 1224

Smartly styled Rogers Super DeLuxe Plastic Switch Plates are available in ivory and brown for prompt delivery. Especially designed for easy cleaning.

Individually packaged in attractive envelopes complete with matching screws.

PRICED FOR FAST TURNOVER.

If your Wholesale Distributor cannot supply you, write us for the name of the one nearest you.

WHOLESALE DISTRIBUTORS — A few territories are still open. Write for complete details.

ROGERS PLASTIC CORPORATION
NORTH WILBRAHAM, MASS.

EASTERN ELECTRICAL SUPPLY COMPANY NEWARK, NEW JERSEY

Established 1912

FOUNDED by A. and L. Beller, this company has served as a distributor of electrical and gas equipment from the time of its inception. Originally doing only a local business, the concern now covers the northern New Jersey territory with a large staff of salesmen. The owners today are A. Beller, M. Beller and S. S. Spring.

I. A. FRIEDMAN AND COMPANY PHILADELPHIA, PENNSYLVANIA

Established 1912

WHOLESALING of electrical supplies, appliances and lighting fixtures has always been the prime function of this company since it was started by I. Albert Friedman. Territory now covered by the sales organization includes the cities of Philadelphia, Chester and Norristown, Pa., and Camden, N. J. Plans for moving into much larger quarters are now under way and will be effected shortly. Harold J. Friedman is a partner in the business.

MISSOURI VALLEY ELECTRIC COMPANY KANSAS CITY, MISSOURI

Established 1912

OPENING their electrical wholesaling business in Independence, Missouri, during 1912, H. A. Esler and L. E. Allen moved their organization to Kansas City, Missouri, in 1917 and changed the name to Missouri Valley Electric Co.

Under the capable direction of H. A. Esler, president and treasurer, and R. B. Brownlee, vice president and treasurer, the company has steadily increased in size. Recently it has purchased a new three story building and adjoining parking lot and has installed complete new office equipment.

Plans now being put into action include intensive cultivation of contractor, dealer and industrial business in western Missouri, the state of Kansas, northeastern Oklahoma, southeastern Nebraska and southwestern Iowa.

GOUGH INDUSTRIES, INC. LOS ANGELES, CALIFORNIA

Established 1912

PROGRESSIVE thinking and planning have characterized the operation of Gough Industries Inc. from the time of its establishment by P. G. Gough and C. E. Listenwalter thirty-five years ago. Besides its electrical supply business the company now handles a complete line of electrical appliances, water softeners, furniture, sound equipment and other electrical products. It has expanded its activities from serving Los Angeles county only to all of southern California, Nevada, Arizona, southern New Mexico and the San Francisco area. Branch stores and offices are operated in Long Branch, Santa Barbara, Bakersfield, San Diego, and San Francisco, California, and in Tucson, Arizona. The company now occupies 144,000 sq. ft. of floor space and employs a staff of 320 people, including a sales staff of 85.

Such employee benefits as liberal bonus plans, paid up life insurance policies at Christmas and a retirement plan financed solely by the company are indicative of its progressive operation.

Today P. G. Gough is president; E. E. Karsten, vice president and general manager; J. S. Addis, vice president; W. E. Listenwalter, secretary; and R. L. Henry, treasurer.

SOLAR LIGHT SUPPLIES COMPANY CINCINNATI, OHIO

Established 1912

THIS company was founded by Clinton Ingels, deceased, and is now owned by his widow, Nelle Ingels, and managed by his son, Otis Ingels. The concern specializes in the distribution of electrical supplies, appliances and lighting fixtures in the greater Cincinnati area. A building at 13 East Court street has just been purchased and is now being remodeled to handle the growing volume of business.

WIEDENBACH-BROWN COMPANY, INC. NEW YORK, NEW YORK

Established 1912

KNOWN as the Wiedenbach-Baker Co., when it was first started in 1912 by A. Wiedenbach, this concern has become one of the largest independent distributors of electric lamps, and is now known as Wiedenbach-Brown Company. Originally covering only the metropolitan New York and parts of New England area, the company through its large sales staff now covers also New Jersey, Pennsylvania, Delaware and Maryland. Nelson D. Brown now serves as president and Walter C. Stockberger is vice president and treasurer.

Manufacturers 35 YEARS 1912-1947

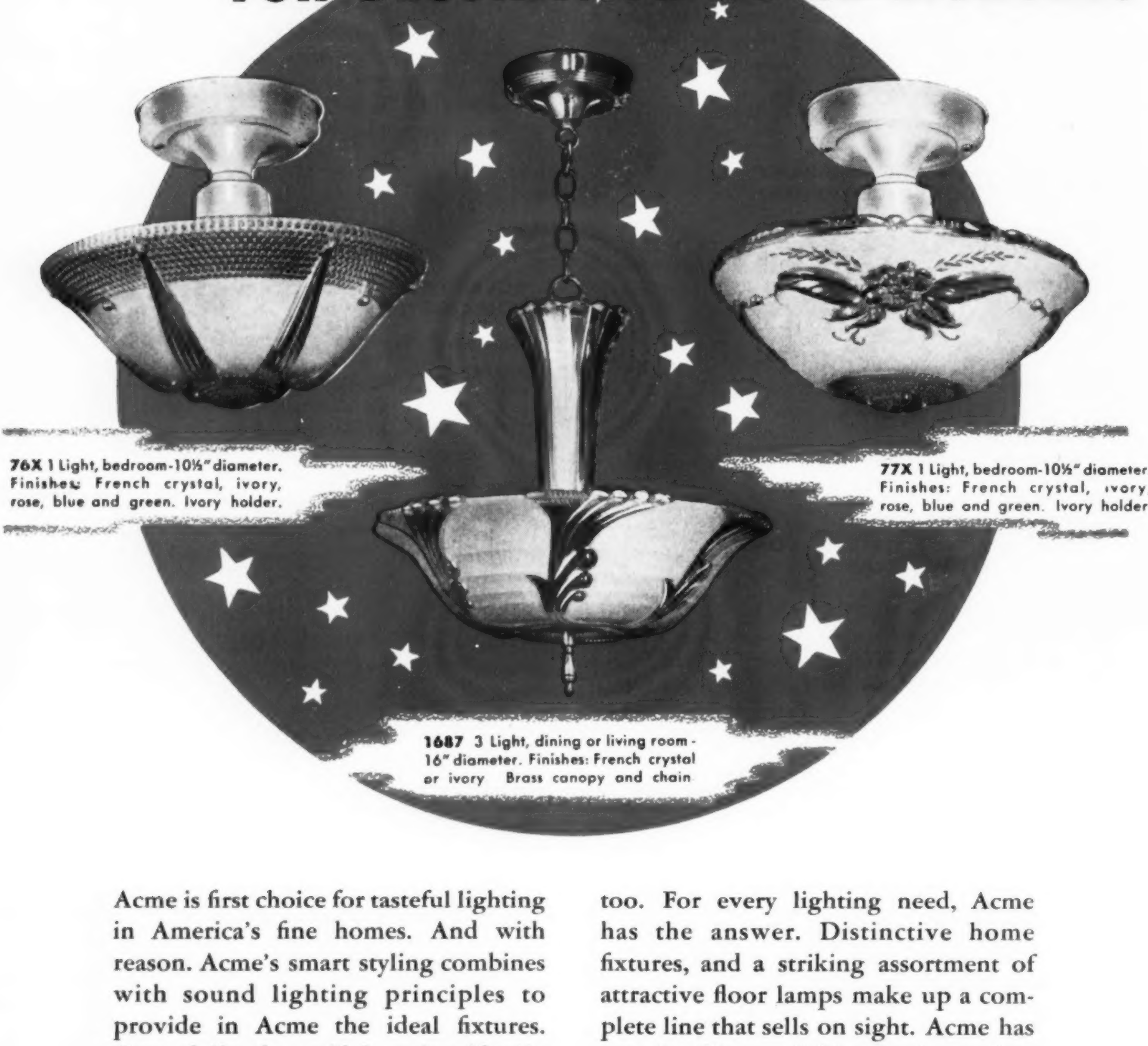
PITTSBURGH REFLECTOR COMPANY PITTSBURGH, PENNSYLVANIA

Established 1912

THIRTY-FIVE years ago, three lighting pioneers—Eugene S. Simons, E. W. Utzler and W. E. Pensyl—established the company with little more than the possession of a secret process for making silvered glass reflectors and a complete faith in their ability to produce an improved light reflector. Their faith was well rewarded and under the able

ACME's the Star..

FOR DECORATIVE HOME LIGHTING



76X 1 Light, bedroom-10½" diameter. Finishes: French crystal, ivory, rose, blue and green. Ivory holder.

1687 3 Light, dining or living room - 16" diameter. Finishes: French crystal or ivory Brass canopy and chain

77X 1 Light, bedroom-10½" diameter. Finishes: French crystal, ivory, rose, blue and green. Ivory holder

Acme is first choice for tasteful lighting in America's fine homes. And with reason. Acme's smart styling combines with sound lighting principles to provide in Acme the ideal fixtures. Gracefully beautiful, scientifically designed to give maximum brightness with minimum glare, these fixtures have an outstanding record of performance, too. For every lighting need, Acme has the answer. Distinctive home fixtures, and a striking assortment of attractive floor lamps make up a complete line that sells on sight. Acme has merchandise available for immediate delivery. And a few territories are available for interested, qualified distributors. Write for prices, particulars.

ACME STAR BRAND

Acme Lighting Products, Inc.

1667 EAST 40th STREET · CLEVELAND 3, OHIO · ENDICOTT 4354

MEMBER: American Home Lighting Institute direction of Mr. Simons, its first president, the company prospered and expanded.

By late 1920 the company had outgrown its small rented space at 3117 Penn Avenue, Pittsburgh, Pa., and had purchased three and one-half acres of ground in nearby Irwin, Pa. There it established production operations in a small one-story brick building—the nucleus around which the present plant developed. Mr. Simons continued as president until his death in 1933, when he was succeeded by his brother who had been with the company since 1922 as advertising manager.

When Mr. Simons retired in 1943, H. C. Zinsmeister succeeded him as president. Mr. Zinsmeister is president of the company today. B. D. Levaur is vice president and sales manager. J. C. Sullivan is treasurer and F. R. Harbison is secretary.

THE PAINE COMPANY
CHICAGO, ILLINOIS

Established 1912

THE Paine Company was organized when M. H. Paine decided he had something to sell and that something to sell was the Spring Wing Toggle Bolt which he believed was a "unique labor and time saving device—*a builder's aid with a thousand uses.*" The company was started in Glen Ellyn, Illinois in 1912 and this year it celebrates its thirty-fifth anniversary as manufacturers of electrical, plumbing and hardware specialties. Present officers of the company are: R. M. Hall, president; E. C. Hall, general manager and secretary-treasurer; William M. Hall, vice president; J. E. Scott, vice president; and V. M. Trostle, assistant secretary-treasurer.

30 YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

Wholesalers 30 YEARS 1917-1947

BIGLEY ELECTRIC COMPANY
FINDLAY, OHIO

Established 1917

ORION M. BIGLEY started his electrical wholesaling and contracting business thirty years ago and it is owned and operated today by Paul R. Bigley. Serving Findlay and surrounding counties the company is now planning many changes and addititons in new departments and warehouse equipment. Three new delivery trucks have already been put into service.

BELL ELECTRIC COMPANY OF PENNSYLVANIA, INC.
SCRANTON, PENNSYLVANIA

Established 1917

PURCHASE and remodeling of a building mark the thirtieth anniversary of the Bell Electric Co. of Pennsylvania, which is operated by Harry Friedman. In addition to the Scranton headquarters, Mr. Friedman has opened three independent branches, each of which is run by one of his children who received their training in the electrical wholesaling business from him. Territory covered by the organization now is northeastern Pennsylvania and the southwestern part of New York.

ELECTRIC SUPPLIES DISTRIBUTING COMPANY
SAN DIEGO, CALIFORNIA

Established 1917

STARTING thirty years ago with a total of 5 employees and 5000 sq. ft of space, the Electrical Supplies Distributing Co. has grown into being one of the major distributors on the west coast with 71 employees and a building of 30,000 sq. ft. and a storage yard of 10,000 sq. ft. in San Diego and 10,000 sq. ft. in its Imperial Valley branch.

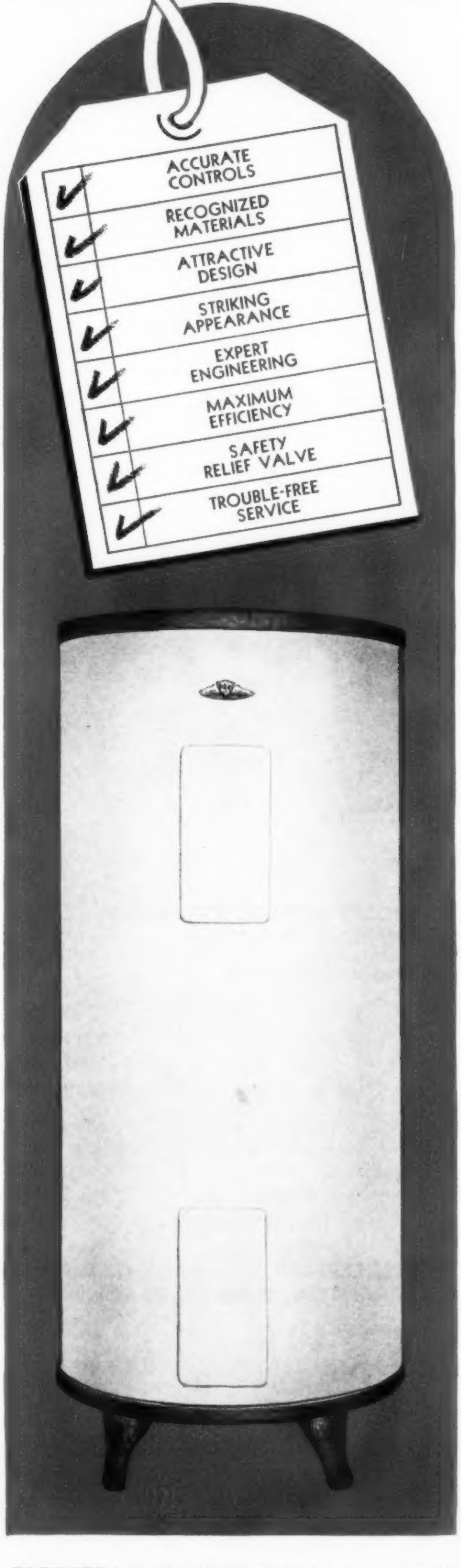
With an exclusive wholesaling policy right from the start, the company has added to its electrical equipment and supply lines major gas and electrical appliances, housewares, radios and neon sign supplies. New departments added since the war are: Commercial lighting and lamps, public utility and appliance service.

Present officers are: Sam L. Hall, president and

REX

ELECTRIC WATER HEATERS

have all these QUALITIES


ACCURATE CONTROLS
RECOGNIZED MATERIALS
ATTRACTIVE DESIGN
STRIKING APPEARANCE
EXPERT ENGINEERING
MAXIMUM EFFICIENCY
SAFETY RELIEF VALVE
TROUBLE-FREE SERVICE

- Rex engineers backed by 40 years of water heater experience have developed a better, enlarged line of electric water heaters.

Safety, so essential to automatic equipment in the modern home today, is a feature of the Rex unit. A Patrol temperature and pressure relief valve is standard equipment with each Rex Electric Water Heater and provides water relief from the tank to a drain in the event of an excessive temperature or pressure condition.

The important background of scientific research, practical design, and accurate workmanship is reflected in its appearance and is your customer's assurance of care-free, efficient hot water service for years to come.

Write for full descriptive literature.

REX
HOTWATER
SERVICE

"Elno"

PROTECTOR

A simple electro-chemical protector, for galvanized steel tanks, prevents rust in new tanks and effectively halts this destructive process where corrosion has been moderate. Elno eliminates the need for expensive non-ferrous or specially processed tanks even where water is so corrosive that such tanks were considered essential. Write for details.

PATENTS APPLIED FOR

THE CLEVELAND HEATER CO.

REX ELECTRICAL DIVISION
2304 SUPERIOR AVE. CLEVELAND 14, OHIO

one of the original founders; Fred G. Goss, vice president and manager; J. H. Barton, secretary and treasurer; Gene M. Cramer, merchandise manager; Bart A. Murray, supply manager; and Milton Taylor, manager Imperial Valley, Branch.

CASPER SUPPLY COMPANY
CASPER, WYOMING

Established 1917

THE Casper Supply Co. with branches in Cheyenne, Laramie, Sheridan and Worland, Wyoming; Rapid City, South Dakota; Scotts Bluff and Chadron, Nebraska, is now entering its thirty-first year in the electrical wholesaling industry. T. C. Tonkin, one of the original incorporators of the company, has been succeeded as president by A. S. Montgomery, formerly secretary and treasurer. Wyoming, western Nebraska and western South Dakota are covered by the sales force.

THE CENTRAL COMPANY
STEVENS POINT, WISCONSIN

Established 1917

THE Guarantee Hardware Co.—predecessor of the Central Co.—was started by Max P. Friday and Frank Literski as a retail outlet. Later expanding into electrical wholesaling, the retail end of the business was abandoned and all efforts concentrated on wholesale distribution with the present name of the company being adopted. Jerome M. Friday and Mrs. Max P. Friday are the present owners. A large new building to house the offices and warehousing activities of the company has just been erected and provision has been made for showroom facilities. Twenty counties in central Wisconsin are covered.

TURNER ELECTRIC SUPPLY COMPANY
DETROIT, MICHIGAN

Established 1917

THE original name—Electrical Warehouse Inc.—established the purpose of this company when it was started in 1917 by Waldso Turner, present head of the organization. At the present time its wholesaling activities are confined to the southern part of Michigan.

STEINER ELECTRIC COMPANY
CHICAGO, ILLINOIS

Established 1917

OPERATING in Chicago and within a 200-mile radius of the city, Steiner Electric Co., founded by George and Harold Steiner in 1917, enjoys an enviable reputation in this area. Special accent has been placed on the important lighting branch of the business and a complete line of industrial, commercial and residential fixtures is being handled in addition to electrical supplies and appliances. At the present time the company is actively promoting bactericidal and health lamps. George Steiner is president and treasurer, Mrs. George Steiner is vice president and Leon Weisbrod secretary.

VALLEY SUPPLY COMPANY
PORTSMOUTH, OHIO

Established 1917

WITH automobile sales gaining rapidly in the year 1917 the Portsmouth Auto Supply Co. was founded to meet the ever increasing demand for accessories. Soon the company name was changed to the Valley Supply Co. and hardware and electrical supplies and building materials were added. Eastern Kentucky and southern Ohio are the areas covered by the company and Calvin Clarke is president; F. A. Lilly, vice president, and L. F. Hoover, secretary and treasurer. Branches are operated in Ashland, Ky., and Ironton, Ohio.

Manufacturers 30 YEARS 1917-1947

THE FOSTORIA PRESSED STEEL CORPORATION
FOSTORIA, OHIO

Established 1917

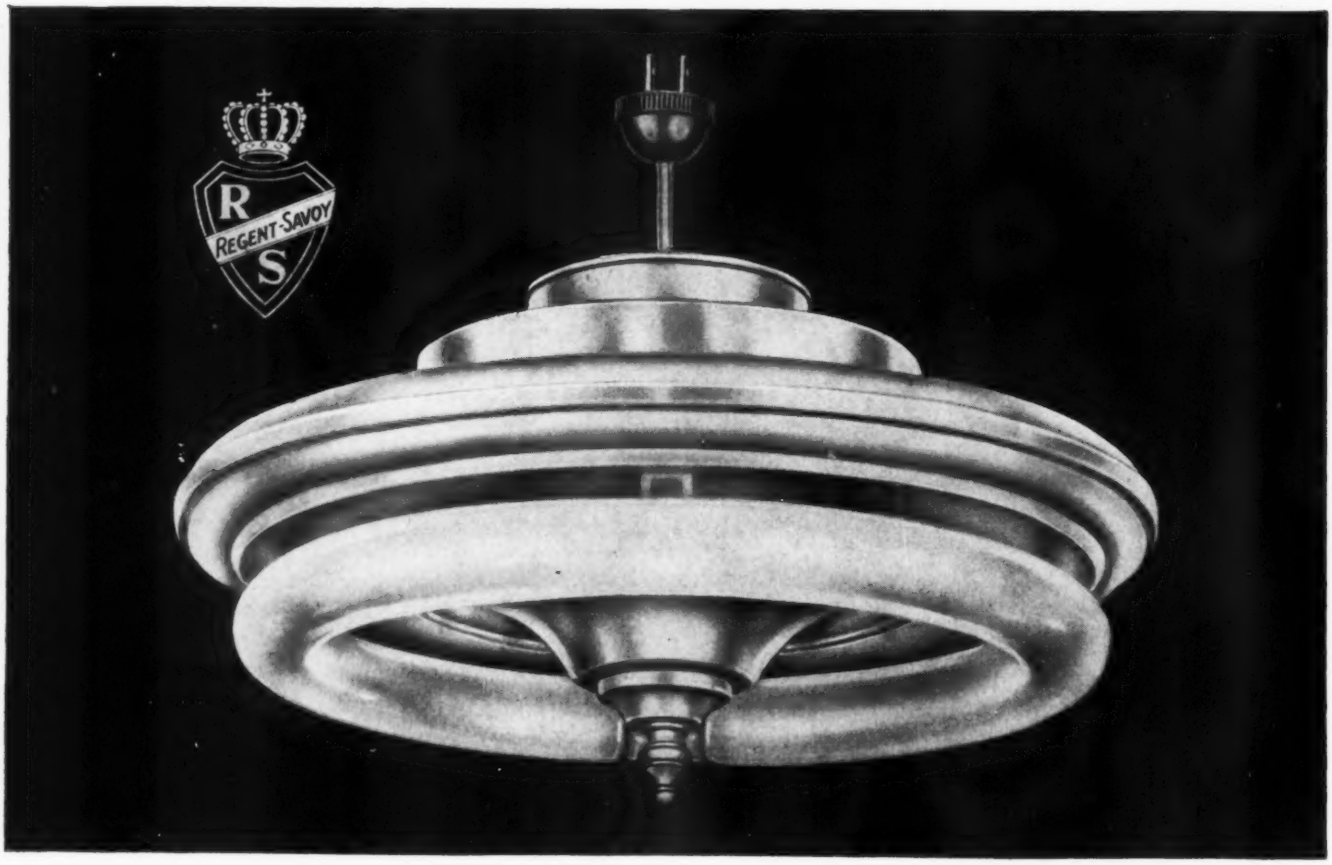
ALTHOUGH the Fostoria Pressed Steel Corporation no longer manufactures replacement automotive fenders (which was its reason for starting in business), it is interesting to note that the company today does manufacture infra-red lighting equipment that can be successfully applied to drying the paint on automotive fenders. In fact the company is now one of the leading manufacturers in this type of equipment and has industrial service centers located in principal cities throughout the country.

Present plans of the company include simplified catalogs that will fit the selling procedures of distributors and wholesalers and separate promotions on items that can be applied to certain markets to help the wholesalers' salesmen. R. J. Carter is president, treasurer and general manager. E. L. Bates is vice president and secretary in charge of sales.

ACME ELECTRIC CORPORATION
CUBA, NEW YORK

Established 1917

THE company was first started in Cleveland, Ohio, in 1917 as the Acme Electric and Machine Company by C. H. Bunch and G. R. Hillstrom. Two years later the name was changed to the Acme Electric and Mfg. Co. Recently C. H. Bunch, president, announced that the company has been incorporated under the laws of New York State and at the same time the name of the company



The No. C-132

Regent-Savoy

PROUDLY PRESENTS THE NEWEST DEVELOPMENT IN FLUORESCENT LIGHTING

DISTINCTIVE
Fluorescent
LIGHTING
by
REGENT-SAVOY
NEW ROCHELLE • NEW YORK

Send for Your Copy of Our New Catalog!

Our products are distributed through recognized wholesalers exclusively. Send for the name of the Regent-Savoy distributor in your territory who stocks our complete line and who can expedite delivery on any of our products.

The Circline Fluorescent unit — designed especially for kitchens, breakfast nooks, dinettes, bathrooms and other installations.

Wired with a genuine, underwriters laboratory approved, 32 watt fluorescent ballast. Unit finished in baked white enamel, shipped complete with 32 Watt Circline Tube. Individually packed one to a carton, six to a master carton.

Be the first in your territory to display and sell this new Regent-Savoy Circline creation. Phone or write for prices. Immediate delivery available.

REGENT-SAVOY ***ELECTRICAL MANUFACTURING CORP.***
NEW ROCHELLE • NEW YORK

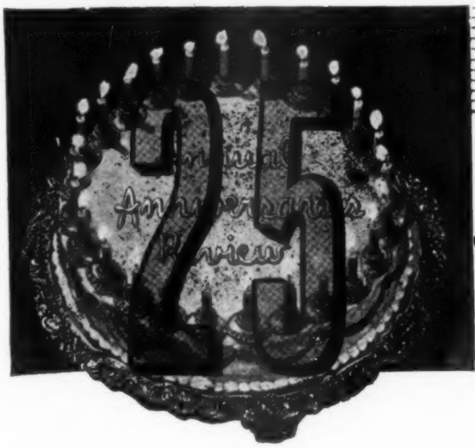
changed to Acme Electric Corporation.

Since the war, a new building has been constructed adjacent to the main plant in Cuba, N. Y. This, together with the factory purchased at Allegany, N. Y., in November 1945, gives the Acme Electric Corp. a total of 110,000 square feet of floor space devoted to the manufacture of its line of transformers used in connection with fluorescent lighting, radio and television, neon signs and electronic devices and rectifiers. The names and titles of present officers are: Mr. Bunch, president; James A. Comstock, vice president; William F. Radon, secretary; and Lewis E. Williams, treasurer.

NORTH AMERICAN ELECTRIC LAMP COMPANY
ST. LOUIS, MISSOURI

Established 1917

THIRTY years ago during the time of World War I, the need to refill lamp bulbs brought together I. H. Cohn, George Betzner, A. E. Glass and Charles M. Rice, who founded the North American Electric Lamp Co. in St. Louis. With the changes in lamp design and decreased costs of production the company abandoned the refilling of old lamp bulbs and turned its attention to the manufacture of the new types of lamps.



YEAR ANNIVERSARIES

of Manufacturers and Wholesalers in the Electrical Field

Wholesalers 25 YEARS 1922-1947

THE B. & B. ELECTRIC COMPANY
CINCINNATI, OHIO

Established 1922

PLANNING an elaborate celebration for this fall, the B. & B. Electric Co. will go on record as having very successfully passed through its first twenty-five years of operation and looks forward to another equally successful period in the next twenty-five years. Territory in which it distributes electrical supplies, appliances, radios and lighting fixtures is confined to the city of Cincinnati and vicinity. Jack I. Bogdan is president and treasurer; Max Getz, vice president; Sophie M. Bogdan, secretary; and William F. Fromeyer, assistant secretary.

COLONIAL ELECTRIC COMPANY
PHILADELPHIA, PENNSYLVANIA

Established 1922

A POLICY of handling only first class merchandise in electrical supplies and electrical appliances has paid good dividends to the owners of this company according to Earl A. Wilson, president and treasurer and one of the original founders. The company covers a territory within a seventy mile radius of Philadelphia as well as the city itself. It has recently redecorated its offices and added a new truck. Further improvements are now planned. Martin T. Nice, also one of the original founders, is vice president and secretary.

FLETCHER STORES, INC.
CAIRO, ILLINOIS

Established 1922

"GLAD to say that we have for years represented some of the finest manufacturers in the nation. We are proud of our lines and try to do our best to do a good and honorable job for them." This philosophy was proclaimed by Everett R. Fletcher, president and founder of Fletcher Stores, Inc. Started as a small retail store in 1922, an electrical wholesaling branch was established in 1923 and eventually the retail end was abandoned and all efforts turned to the distribution of electrical supplies.

From a strictly local operation the company has stretched out and now sells in southern Illinois, western Kentucky, southeastern Missouri. A new office building was opened in 1945 and a new warehouse in 1946. Maud C. Fletcher is vice president and Constance Eichoff is secretary.

CRESCENT ELECTRIC SUPPLY CO.
SAN FRANCISCO, CALIFORNIA

Established 1922

TWENTY-FIVE years ago Jim Hirschfield and Harry Snyderman opened their electrical wholesaling business in San Francisco and through the years the concern has grown into an organization that extends its sales activities to all of northern Cali-

AMERICA'S RELIABLE 24-HOUR-A-DAY GUARDIANS

BADGER Synchronous Automatic Time Switch . . . heavy duty time switch with capacity to meet a wide variety of requirements.

RELIANCE

AUTOMATIC TIME SWITCHES

The dependability of RELIANCE Automatic TIME SWITCHES has been proved in emergency as well as in normal times. They are giving complete and reliable service under many and varied conditions—a factor of paramount importance particularly in these times when constant good service is so essential. RELIANCE Switches are easy to install, economical in operation, and meet a wide variety of needs. The present sales possibilities should interest you—tap this rich source of today's business.

- *Catalog and price sheets available on request.*

RELIANCE Model W Synchronous Electric Time Switch . . . completely automatic — extremely simple, compact, economical — three types cover practically every requirement. Built to highest standards of accuracy.

Astronomic TIME SWITCH

The Model "W" Astronomic types are particularly popular for advertising illumination. The "on" operation changes daily to correspond with local sunset time, eliminating the necessity of resetting dial as the days become longer or shorter.

RELIANCE AUTOMATIC LIGHTING CO.

1907 Mead Street Racine, Wisconsin

fornia, southern Oregon and as far East as Reno, Nevada. Recently the company installed a special lighting department to cope with the tremendous demand for lamps and lighting equipment on the West Coast. The present owners are Jim and Dick Hirschfield and George Swett.

FLATBUSH LIGHTING FIXTURE COMPANY
BROOKLYN, NEW YORK

Established 1922

WITH efforts concentrated on the distribution of lamps and lighting equipment from its inception, the Flatbush Lighting Fixture Co. was founded and is operated today by B. Schwartz. It has built up an enviable reputation in the Long Island sector of metropolitan New York, handling a full line of electrical supplies and electrical appliances. S. B. Schwartz is a partner in the company.

GRAND BRASS AND ELECTRICAL SUPPLY CO.
NEW YORK, NEW YORK

Established 1922

AN OUTGROWTH of the Clinton Metal Mfg. Co., the Grand Brass and Electrical Supply Co. was organized in 1922 to distribute electrical supplies, lighting equipment and major appliances in New York City. Present owner, Leo Hirschberg, is looking forward to a great increase in the commercial lighting field in this area and will devote his attention to that market.

KIEFER ELECTRICAL SUPPLY COMPANY, INC.
PEORIA, ILLINOIS

Established 1922

TWENTY-FIVE years in the electrical wholesaling business is being celebrated by the Kiefer Electrical Supply Co. with a complete remodeling of its present headquarters. New offices, a new front on the building, new warehouse facilities and a series of lighting fixture display rooms are included in the program. Present officers of the company are W. R. Kiefer, president and treasurer; E. N. Kiefer, vice president; A. H. Kiefer, secretary.

HOLMES ELECTRIC SUPPLY COMPANY
PORTLAND, MAINE

Established 1922

CULTIVATING the rural as well as the urban area in the Portland territory has been extremely profitable for the Holmes Electric Supply Co. and now it covers the states of Maine and New Hampshire and northern Vermont. Increased volume of business has necessitated enlargement of office and warehouse facilities but the company still operates at the same address at which it was started. Ronald T. Holmes is the sole owner of the business as well as one of the original founders.

LEWIS ELECTRIC COMPANY
BEDFORD, INDIANA

Established 1922

INDUSTRIAL electrical contracting claimed the attention of the Lewis Electric Company when it was first established by C. F. and S. P. Lewis in 1922. After first adding diesel power-plant construction to its work, it turned eventually to electrical wholesaling and is now operating exclusively in this field. The present owner, S. P. Lewis, purchased the interest of C. F. Lewis in May 1945 and the company operates in all the southern counties of Indiana.

LOWRY ELECTRIC COMPANY, INC.
WILLIAMSPORT, PENNSYLVANIA

Established 1922

NOW in its twenty-fifth year of operation, the business record of the Lowry Electric Co., Inc., could well be termed a case study of a successful electrical wholesaler.

Opened by Frank Lowry, present president and treasurer, in 1922 the business first occupied a room 9 ft. by 12 ft. By 1944 it had enlarged its plant and had increased its force to 35 employees with 9 salesmen on the road covering northern and central Pennsylvania.

In 1944 to his electrical wholesaling business Mr. Lowry added an Industrial and Equipment Division. Additional warehousing was required not only for this, but for his growing volume of electrical supply sales.

The expansion program now under way, when completed in its entirety, will give Lowry Electric an up-to-the-minute organization.

LIBERTY ELECTRIC SUPPLY COMPANY
(Division of Sullivan County Plumbing and Heating Supply Company)
LIBERTY, NEW YORK

Established 1922

AN effective "on the job" training program has developed for the Liberty Electric Supply Co. a well-trained and competent staff including twelve former G. I.'s, and has enabled it to expand its coverage to include Sullivan, Orange, Delaware and Ulster counties in New York and Pike and Wayne counties in Pennsylvania. When founded in 1922 the company occupied a total of 3000 sq. ft. of office and warehouse space, but today it requires 35,000 sq. ft. and 5 acres of yard space to satisfactorily carry on its supply business.

MAURICE ELECTRICAL SUPPLY CO., INC.
WASHINGTON, D. C.

Established 1922

ALL set up and operating in its new building, the Maurice Electrical Supply Co., Inc., now distributes along the Atlantic seaboard from Baltimore, Md., to Miami, Fla. This company was founded twenty-five years ago by Maurice Abraham

An important Message to

NEWART

DISTRIBUTORS

and their

SALESMEN

● For the past twenty years Newart outlet boxes and fittings have been carried by a large number of distributors.

At present we are producing boxes and fittings as rapidly as existing conditions permit.

We are making reasonable deliveries on many items and with the anticipated improvement in materials available our production will keep pace with material availability.

We greatly appreciate your tolerance over the past months and assure you that we are doing our utmost to fill your orders on the most equitable basis possible.

NEWART MFG. COMPANY

6725 Machinery Avenue, CLEVELAND 8, OHIO

and Gus Salomon to handle electrical supplies and lighting equipment and fixtures exclusively in Washington, D. C. Today it employs twenty-five people and its new four-story, limestone building, covering a lot 100x100 feet, houses a modern and streamlined headquarters establishment. Present officers are Maurice Abraham, president; Ida Salomon, vice president and secretary; and Bernard S. Green, treasurer.

PENSACOLA HARDWARE CO.
PENSACOLA, FLORIDA

Established 1922

CONSCIOUS that success in the electrical wholesaler's operation is partially due to the giving of fast, efficient service, the Pensacola Hardware Co. has already two new delivery trucks in operation and has three more on order. Electrical supplies, electric and gas appliances, mill supplies and floor coverings are now handled by the company and R. G. Martin is president. Other officers are W. F. Lewis and L. P. Kuester, vice presidents and J. G. Cuninghame, secretary and treasurer.

PARAMOUNT ELECTRICAL SUPPLY CO., INC.
NEW YORK CITY, NEW YORK

Established 1922

WITH the same group of officers today as it had when established, this company has branched out from serving only metropolitan New York to a territory including New Jersey, Pennsylvania, Washington, D. C., Maryland, Delaware and Connecticut, Rhode Island and Massachusetts. An ambitious program now under way includes occupying its own six-story building with new office and warehouse facilities installed. Heading the company is Harry Ralston, president with Herbert Hammersley, vice president, and C. A. Kabat, secretary and treasurer.

STERN AND COMPANY, INC.
HARTFORD, CONNECTICUT

Established 1922

STARTING as a three-part organization—manufacturing, wholesaling and retailing—this company abandoned its amateur radio equipment manufacturing and retailing activities in 1925 and thereafter devoted all its efforts to the wholesale distribution of electrical appliances, radios and radio parts. Connecticut, western Massachusetts and Vermont are covered by the company's salesmen.

POWER CITY RADIO CO.
SIOUX FALLS, IOWA

Established 1922

HOME radio was in its infancy when the Power City Radio Co. was formed in 1922 to fill the radio parts needs of the many who were "bitten by the bug" to build their own radios. With a steady growth in its radio and radio parts business a complete line of electrical appliances was added and the territory expanded to cover all of South Dakota, parts of Minnesota and Iowa and a new branch opened in Sioux City, Iowa. William B. McKenzie, son of F. H. McKenzie, founder of the firm and Mrs. M. R. Quigg, wife of the founder, are co-partners.

Manufacturers 25 YEARS 1922-1947

HALCOLITE COMPANY, INC.
BROOKLYN, NEW YORK

Established 1922

FORESEEING a large demand for improved home lighting, the Halcolite Company was established early in 1922 to manufacture residential lighting fixtures. Originally the company designed and produced lighting equipment for the modest budget home but the line was expanded eventually to also meet the lighting needs of the costlier type of home. The original founders are still with the company today—Morris Levitan, president; Max Held, vice president; and Matthew Aaron, secretary-treasurer.

QUADRANGLE MANUFACTURING COMPANY
CHICAGO, ILLINOIS

Established 1922

WHEN this company was originally organized—twenty-five years ago—its main product was commercial hangers. New products have since been added until today this company manufactures many types of incandescent industrial lighting fixtures. With slight changes, the original members are interested in the company today—Dwight E. Worrel, president; George Arras, vice president and treasurer; J. R. Gallaher, (who has rejoined the company after four years of military service), is now the new secretary.

THE TORK CLOCK COMPANY, INC.
MOUNT VERNON, NEW YORK

Established 1922

THE Tork Company was originally incorporated in 1922 for the production and sale of spring driven time switches. Offices were at 8 West 40th Street, New York City and all manufacturing took place at the Ansonia Clock Company in Brooklyn. As with the clock business in general, the time switch business was revolutionized by the advent of synchronous timing. Tork's first synchronous models were produced in 1929. Since 1940 the company has carried on all its own manufacturing operations in its own plant at Mount Vernon, N. Y. The officers of the company are C. J. White, president and treasurer; A. A. Berard, vice president; and M. W. St. John, secretary.

Look to the Future

. . . with

Circle Lighting Industries

First to recognize CIRCLINE

CIRCLINE...

the newest feature in the fluorescent field

- **General Electric major component parts used throughout.**
- **Performance guaranteed, quality assured.**

•

Sold exclusively through recognized wholesale electrical jobbers and distributors.

Write today for price lists and discount arrangements.

•

Fixture and lamp units individually packaged. Shipped complete with fluorescent tube. Available for immediate delivery.

CIRCLINE CEILING FIXTURE—surface mount high gloss white enamel for maximum soft light diffusion, brite chrome lower plate easily detachable for replacing concealed starter. Circline fluorescent utility fixture is designed for bedroom, kitchen, bathroom, and rumpus room. Adaptable for side wall lighting. Over all size: 14⅞" diameter, 4½" depth. Weight 10 lbs.

CIRCLINE DESK LAMP—statuary bronze plated or metallic grey. Scientifically designed shade, white baked enamel inside. Push button switch in base. Over all size: 14" diameter, 18" height. Weight 12 lbs.

REPRESENTATIVE GEORGE GOMBERG WILL BE AT THE

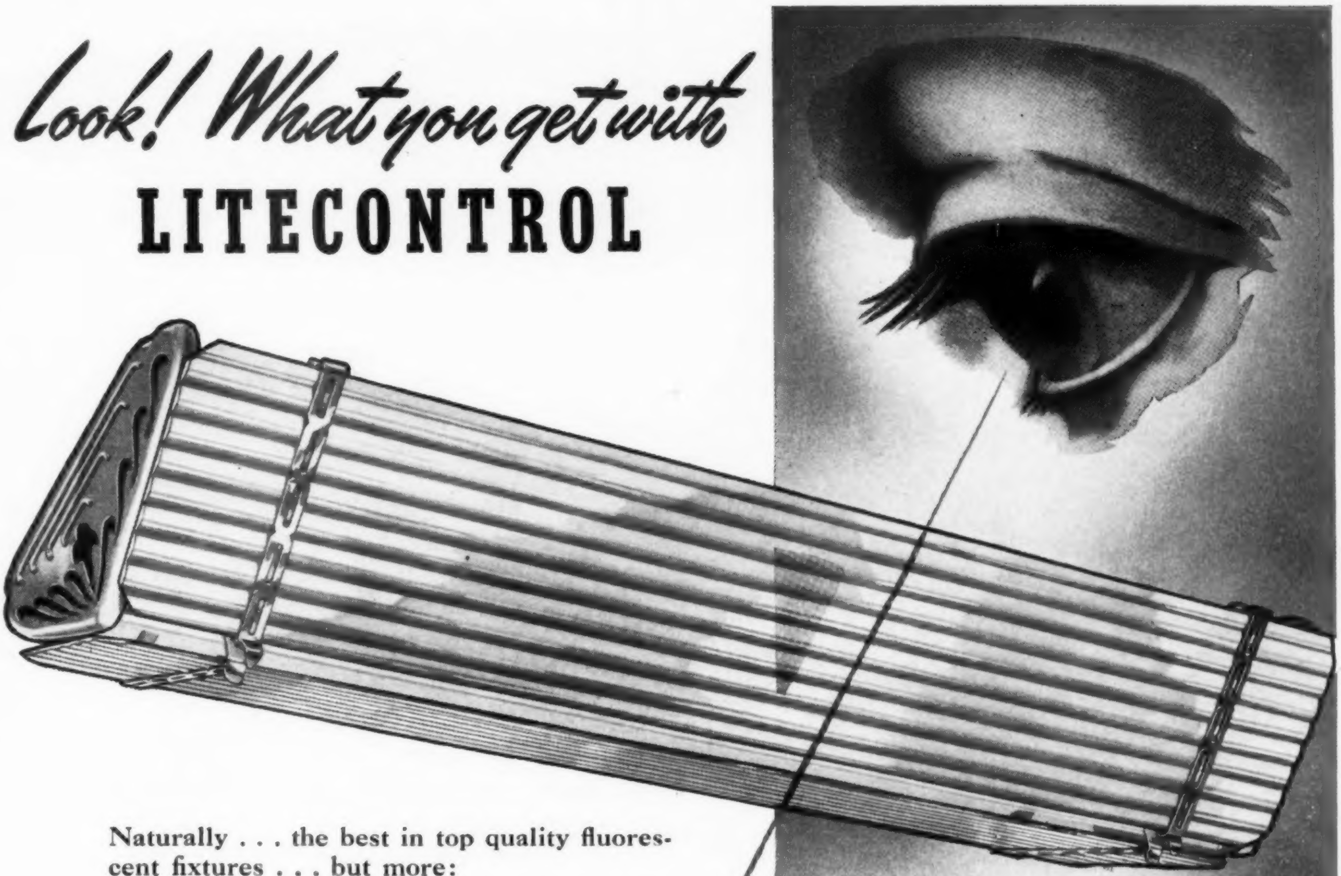
N. E. W. A. CONVENTION

ATLANTIC CITY—MAY 4 THROUGH MAY 8

Circle Lighting Industries

3654 WEST LAWRENCE AVENUE • CHICAGO 25

Look! What you get with
LITECONTROL



Naturally . . . the best in top quality fluorescent fixtures . . . but more:

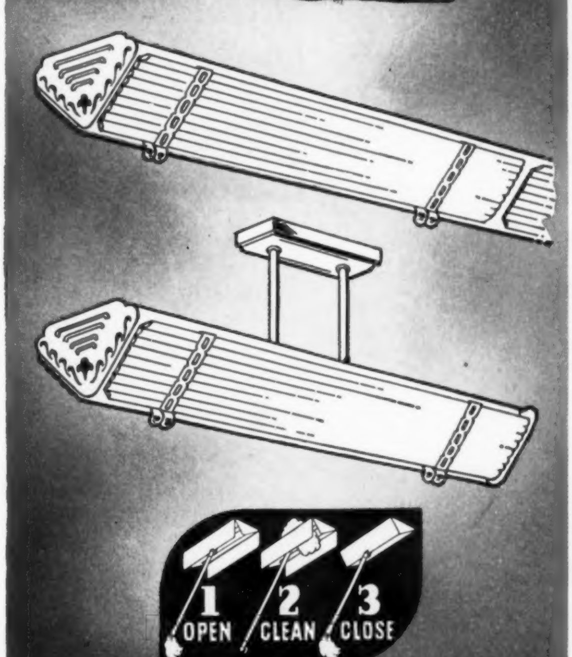
EASE OF INSTALLATION: a strong point, much appreciated by contractors . . . easy-to-install LITECONTROL Fixtures are packed regularly one to the package with ample knockouts, other electricians' aids and instruction sheet included.

EASE OF MAINTENANCE: a constant source of satisfaction to the user. Ease in cleaning, lamping and servicing "engineered" into each model. Many may be cleaned while standing on the floor. Until you standardize on LITECONTROL fixtures, you cannot expect LITECONTROL supremacy.

LITECONTROL CORPORATION

Designers, Engineers and manufacturers of fluorescent lighting equipment distributed only through accredited wholesalers.

36 Pleasant Street, Watertown 72, Massachusetts



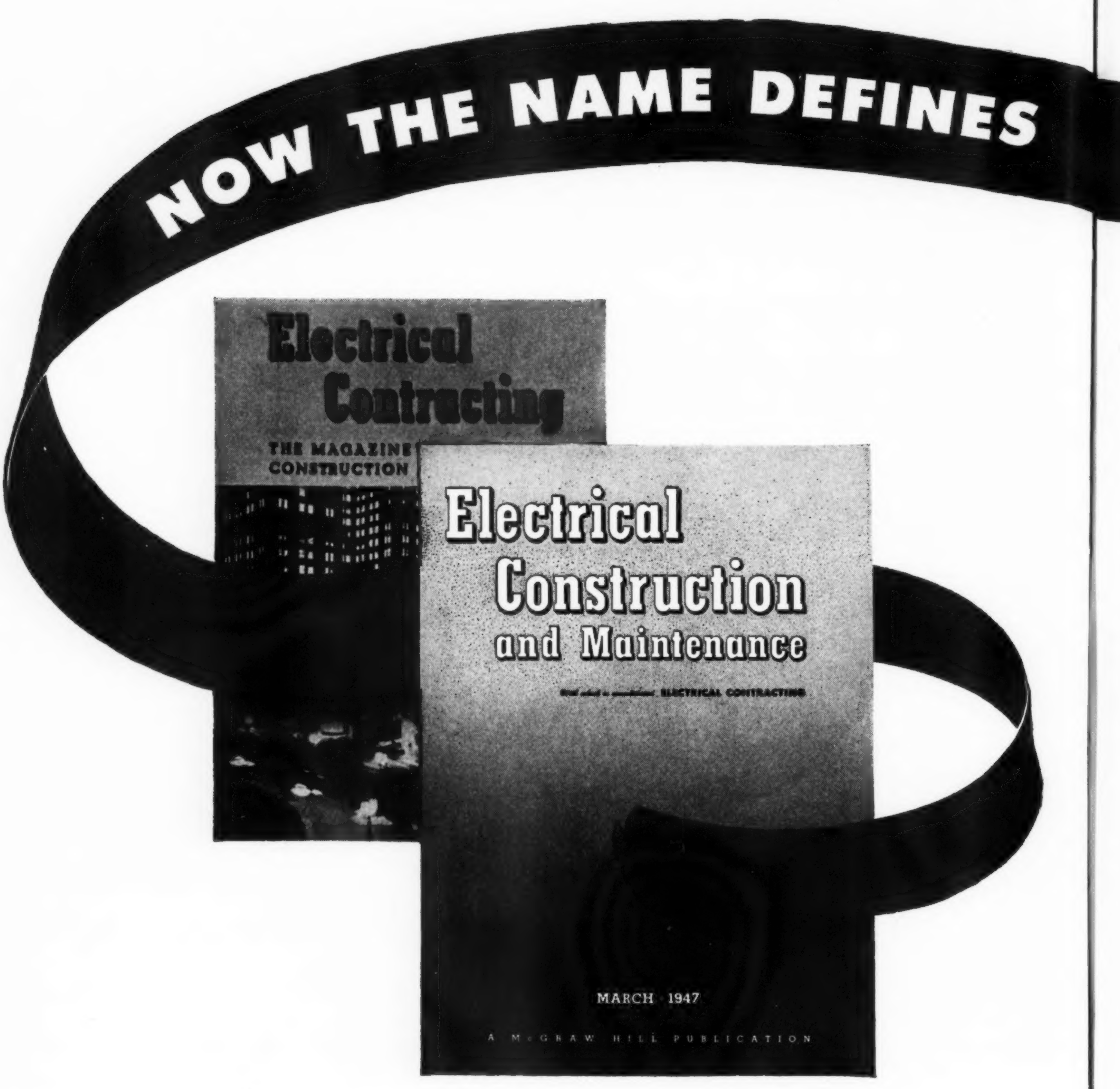
CORONET SERIES: favorites in all projects. Surface, pendant and continuous styles. Single, two and four lamp types.

LC

LITECONTROL
FIXTURES

KEEP UPKEEP DOWN

NOW THE NAME DEFINES


Electrical Contracting
THE MAGAZINE
CONSTRUCTION
Electrical Construction and Maintenance
MARCH 1947
A McGRAW HILL PUBLICATION

With the March, 1947, issue, ELECTRICAL CONTRACTING changes its name to *ELECTRICAL CONSTRUCTION AND MAINTENANCE*. This change is made so that the title will more accurately portray the readership and the market served by this 46-year-old veteran of the electrical industry.

THE MARKET . . .

A MAGAZINE DEVELOPS IN STEP WITH ITS MARKET, if it's the kind that gives constructive leadership to a growing industry.

Electrical Contracting has grown up with *its* industry—from the days when it was a swell little "wiring" magazine serving early-day electricians, right down to the year 1947, when it has 22,000 high-calibre businessmen and technicians as subscribers.

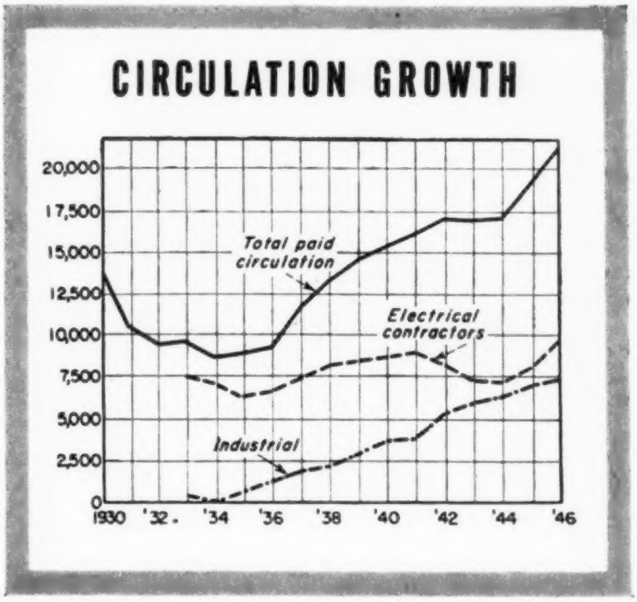
Once, any electrician with a thousand dollars in the bank could step out as a contractor, bid on a few jobs and be in business. Now, electrical construction embraces jobs costing millions of dollars each and calls for superior skill—the kind of skill that comes only from years of education and practical experience in the electrical field. *Electrical construction* includes not only the wiring of buildings, but the vast volume of electrical work connected with airports, highway lighting and traffic control, stadium lighting, and so on.

And in industrial plants, where a generation ago any ingenious mechanic could hang a few fixtures or connect up a motor, and not get into too much trouble, you now find competent electrical specialists heading up full-fledged *electrical maintenance departments.* On the average, these men carry the title "chief electrician."

These two groups of men have natural common interests. In combination, they meet all the tests of a homogeneous market:

1. They work with the same apparatus and supplies.
2. They work with the same tools and use the same working techniques.
3. Wherever they work, their duties call for substantially the same technical knowledge.
4. They employ the same trade terms and use the same slang in conversation, writing, or ordering materials.
5. They buy from the same sources.

For years, Electrical Contracting has served both these groups — electrical construction men and industrial plant chief electricians—with increasing success. Just one look at the graph of circulation growth at the right demonstrates that fact. Note how, despite the implied limitations of the name Electrical Contracting, the industrial plant circulation of this magazine has gone up in the past ten years from almost nothing to its present total of over 7000!


CIRCULATION GROWTH

So, in order to describe and define our readership and our market accurately, we have adopted the new name . . . Electrical Construction and Maintenance.

There will be no noticeable change in editorial content, except to keep pace with the technique of our industry. The loyalty of our readership proves we have been serving this market adequately. (Renewal percentage 66.34%, as this is written.)

There will be no change in the character of our circulation—we will continue our present balance between the two major groups. We will deliver 22,000 or more paid circulation.

There will be no change in space rates or mechanical specifications.

Our new name has been adopted solely so that the subscriber will know exactly what he will find inside the publication, and so that the advertiser will know what market we are covering for him.

ELECTRICAL CONSTRUCTION AND MAINTENANCE

ABC FORMERLY ELECTRICAL CONTRACTING ABP
A McGRAW-HILL PUBLICATION • 330 W. 42nd ST., NEW YORK 18, N. Y.

CENTRALITE

(Pioneers of Instant Starting)

FLUORESCENT FIXTURES

HIGHEST QUALITY BAKED ENAMEL FINISH

Model 440 VG, 4-40 watt lamp unit. Suspension mounting only. Streamlined, glass enclosed. V-type body used. Glass panels of frosted louvre glass. Clear glass available. 90% of light diffused down and out. 10% is thrown on ceiling for desired effect.

GET A QUICK START ON MORE SALES WITH THE LINE THAT REQUIRES NO STARTERS . . .

This line was designed not only to give the users the exceptional in beauty but to also give them top performance. 20-gage steel used throughout complete line. Each unit individually packed and ready for immediate installation. Underwriters Approved, union made.

Investigate CENTRALITE Fluorescent Fixtures—see why they assure you a profitable answer to fluorescent lighting sales. Write today for literature.

Companion units. Model 440-C-8 and 240-C-8. Available in either four 40-watt lamp or two 40-watt lamp. Drop or surface mounting must be specified. Finished in white baked enamel of highest quality possible. Reflectors are die formed to insure rigidity and uniformity. End plates all metal and held in place with metal nut easily removable.

CENTRALITE CO.

(Division of Central Neon Co.)

Dayton St. and Central Ave. • Cincinnati 14, Ohio

All metal—individual industrial units. Model 240-C-13 for two 40-watt lamp. 110-125 volt, 60 cycle A. C. Lights instantly—no starters required. Longer lamp life. Operates on line voltage drops as low as 85 volts. High power factor corrected to 90% or better. Lights at zero temperatures. Reduces maintenance costs to a lowest possible minimum. Can be mounted individually or in continuous rows.

LIGHTS IN A FLASH

NO STARTERS

Cash Discount Controversy

CASH discounts have an important part in keeping a wholesaling operation out of red ink. The keener competition rages—the more important becomes that cash discount. It represents the difference between profit and loss on many transactions. When cash discounts are reduced on goods that the wholesaler buys, that reduction represents an irreparable loss because the wholesaler cannot simply pass the cut along to his customers.

Not in many years has a change in the cash discount policy of some manufacturers caused such genuine concern among wholesalers, as is evidenced by letters to the editor of their magazine—ELECTRICAL WHOLESALING.

We reprint here two letters that state the case for the wholesaler clearly and invite further comments on this subject from manufacturers and wholesalers alike.

The EDITOR

AIR MAIL March 20, 1947

Dear Fred:

There is an increasing trend in our industry of manufacturers lowering cash discounts or discontinuing them altogether, also of changing the cash discount period from once to twice a month.

Undoubtedly, manufacturers are doing this in order to cover up necessary price increases in their products, because they don't want the publicity attendant upon further price increases at this time.

This is certainly the backdoor way of doing business according to our thinking. They have thought only of their own problem of increasing prices to absorb their increased cost, but what about their distributors' problem along the same line?

The salary portion of a wholesaler's overhead is by far the biggest percentage of his entire expenses, and in most cases the salaries have gone up a hundred per cent since 1939. Now, if the jobber has to absorb cash discounts, work on a smaller margin, and pay for his goods twice a month in the face of weakening credit in his customers' field, he certainly is extending his services without being compensated in his profits.

Distributors are only part of our three-point economy of manufacture, distribution and consumption, but they are a vital part, and anything which damages the distribution end will eventually hurt the factories and their production.

Don't you think manufacturers should consult with their distributors before making such changes? Retail dealers are also up in arms about these changes in cash discounts, and there is certainly going to be a strong and unfavorable nationwide repercussion.

Wouldn't it be possible for you to take a poll through ELECTRICAL WHOLESALING and see what the opinion of this practice is throughout the country? I think the results would be most interesting to everyone concerned and especially to the manufacturers who have gone ahead on this plan, thinking only of their own problems.

I would be interested in hearing your views on this too.

Kindest personal regards.

Cordially yours,

March 17, 1947

Dear Fred:

One of the things uppermost in minds of Electrical Wholesalers at the present time is the fact that many manufacturers have reduced their cash discounts. On some small items the amounts may be considered trifling, but when two of the very large manufacturers of rubber covered wire have gone to ½ of 1% cash discount, the volume that is at stake causes this drastic change to be a matter of real concern.

I am enclosing copy of letter that I wrote to one of these manufacturers.....

....

"You have asked me to comment on your present sales policy on building wire. I will only give you my own reaction.

"First, regarding your prices. I care but little whether your price today is higher or lower than your competitors. Manufacturers' costs run about parallel and if one manufacturer is either too high or too low his cost and competition will soon cause an adjustment. The eliminating of zone prices and delivering at the same price throughout the entire United States is quite largely a manufacturers' problem. Delivery is part of your cost on which your selling prices are based and I can visualize some wholesalers throughout the east and central part of the country feeling that they are paying for the higher cost of delivery throughout the west. Your change from 2% to ½ of 1% cash discount appears to be much more important to the wholesaler than a difference of 1½% in his cost. A wholesaler in buying wire from you must make one of two decisions.

"First, he may decide to continue giving his customers 2% cash discount so that they will keep on discounting his bills. In this case the wholesaler's loss is not 1½%, for you can easily figure that on a fairly large order this difference of 1½% is equal to 12½% of the wholesaler's profit, and on a large order with close competition this might represent 30% of the profit. A wholesaler is always jealous of his cash discount profit at the end of the year but if he did a good wire business on the above basis his profit on cash discounts might be shown in red ink.

"Suppose the wholesaler passed on your discount of ½ of 1% to his contractor customers. They did pretty well in 1946 and for a number of years their war contracts on a cost plus basis made them quite secure for the government paid for their mistakes and inefficient operation. This gravy train is gone. Contractors are now on a highly competitive basis. Their income taxes and payments for inventories that are now coming in will hit their bank balance pretty hard. It is more than possible that many of these customers would decide to discount their 5% and 2% bills and let their wire bills run to full maturity or perhaps to sixty or ninety days. In many cases this would result in stretching the customers' line of credit beyond safe limits. This is not the time to encourage credit expansion. I think you can see too that many wholesalers who might find a large part of their working capital tied up in wire accounts might decide to withhold payment from the manufacturer until they have collected from their customers. It is quite apparent that either of the above methods would have the effect of upsetting established policies that have worked very well in the past.

"My own reaction is that your wholesaler customers would be greatly pleased if you were to restore your former cash discount of 2%."

SEE UNION FIRST

For BAKELITE BUSHINGS

With and Without Locknuts

Any Size

B-18

B-18-LN

Any Quality

B-14

B-14-LN

IMMEDIATE DELIVERY

B-122

B-122-LN

B-12

B-12-LN

B-38

B-38-LN

HOT MOLDED PROCESS

PRODUCING STRONG SHARP SEAMLESS THREADS

Recommended for use in temperatures to 300° F.
Available in 1/8", 1/4", 3/8" and 1/2" pipe thread sizes.
Bakelite Bushings, carrying the suffix "LN", supplied with precision formed, cadmium plated, steel locknuts.
Order, today, through your jobber.

UNION INSULATING CO., INC.

PARKERSBURG, WEST VIRGINIA

JOHNSON
Lumarith
WALL LIGHT
Lumarith LAMP SHADE
106

JOHNSON *Lumarith** WALL LIGHTS

The lamp is of moulded Lumarith*—the nationally advertised Celanese* plastic—with the color clear through . . . won't fade, dry out or crack . . . a perfect color match to the rich, glowing beauty of the translucent Lumarith* Lamp Shade.

BEAUTIFUL PASTEL COLORS

Smart pastel colors that match Celanese* fabrics, harmonize with any interior. Choice of ivory, rose beige, blue, maize, pink and green.

IT'S WASHABLE . . .

Lumarith* is tough, durable, long lasting. The entire unit is washable . . . just the whisk of a damp cloth removes dust and dirt, restores original beauty.

LIGHT IN WEIGHT

Johnson Lumarith* Wall Lights are light in weight—can be readily hung with picture hook packed with lamp.

NATIONALLY ADVERTISED

Lumarith* is nationally advertised . . . in Time, Life and over the radio . . . by Celanese*, a name familiar to all women.

*REG. U. S. PAT. OFF.

STYLE NO.
106

STYLE NO.
100

PREPACKAGED
CORRUGATED CARTONS

LARGE PICTORIAL LABEL

Lamp and Lamp Shade are prepackaged in sturdy cartons—no extra packaging necessary by jobber or retailer. Large pictorial label shows exact contents and color. Stack compactly.

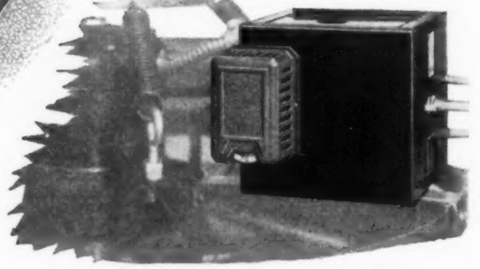
WRITE FOR COMPLETE INFORMATION!

Wholesale prices—full markup to jobber and retailer. FREE Jobber Catalog Pages in color. Excellent delivery. Inquiries solicited from reputable wholesalers on Johnson Lumarith Wall Lights and other items. Write today.

JOHNSON PLASTIC LIGHT CORP. 3412 "J" STREET, PHILA. 34, PA.

STRATO-LIMINATOR

Thermostatically Controlled Air Circulator for Efficient No-Draft Ventilation



Thermostatically Controlled for Automatic Operation—When the temperature at ceiling level of a room rises above normal, the Strato-Liminator turns itself on. Thermostat settings range from 55° to 85°. Speed of the rotating blades may be changed by a simple manual control.

Strato-Liminator Automatic Air Circulator Model 110, shown above, recirculates air completely every three minutes in 5,000 cubic feet of space—*without direct drafts*. Specially designed louvers diffuse the air downward, creating a cooling, stimulating effect. This constant flow of natural air increases personal comfort and efficiency during hot summer months.

During cold weather Strato-Liminator Air Circulators pay for themselves by cutting fuel costs up to 20%. Being attached to the ceiling, these units diffuse wasted warm air from the ceiling providing uniform temperature in all parts of the room —*without direct draft*.

Thousands of Strato-Liminators in offices, factories, stores, recreation halls, etc., are paying big dividends through refreshing healthful air circulation—summer and winter.

Write today for folder A-1 and prices. Sold only through wholesalers—offers year 'round opportunities for sales.

THESE OUTSTANDING FEATURES PROMOTE YEAR 'ROUND SALES

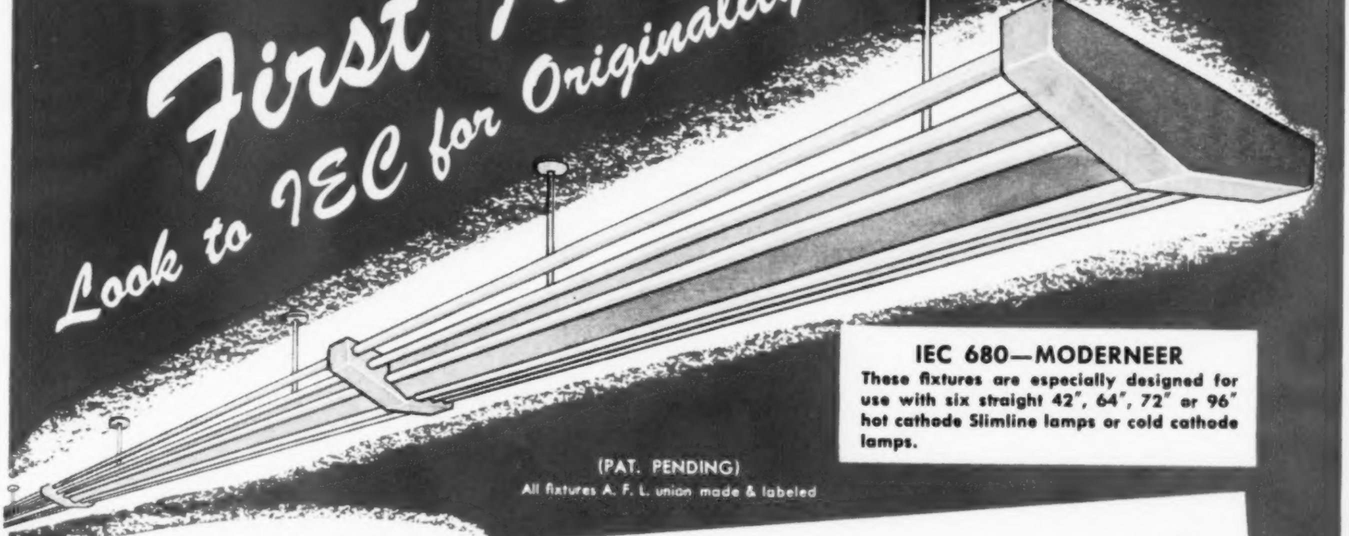
- Thermostatically controlled for automaic operation.
- Cool, no-draft ventilation in hot weather.
- Fuel-saving heat-diffusion in cold weather.
- Dissipates stale air pockets and unpleasant odors.
- Easy to install.

WILSTER, inc.

5700-F DETROIT AVENUE • CLEVELAND 2, OHIO

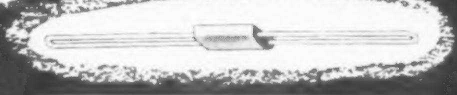
First Always

Look to IEC for Originality in Design

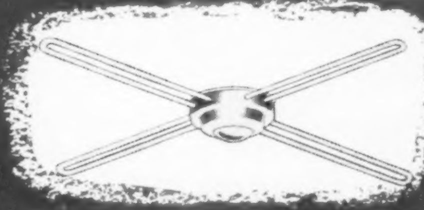


IEC 680—MODERNEER
These fixtures are especially designed for use with six straight 42", 64", 72" or 96" hot cathode Slimline lamps or cold cathode lamps.

(PAT. PENDING)
All fixtures A. F. L. union made & labeled



U-280 LUMENEER JR.
These are designed especially for use with the modern cold cathode hairpin lamps.



UX-480 LIGHTALEER JR.
This is one of the newest units using the new COLD CATHODE hairpin lamps and is fast becoming a leader.

- LOOK TO "IEC" FOR NEW DEVELOPMENTS IN SLIMLINE AND COLD CATHODE LIGHTING.
- WHEN BETTER LIGHTING FIXTURES ARE DESIGNED "IEC" WILL DESIGN THEM.
- SPECIFY "IEC" LIGHTING UNITS ON YOUR NEXT JOB AND YOU SPECIFY THE BEST.

SEND FOR CATALOGUE SHOWING OUR COMPLETE LINE.

PIONEERS AND LEADERS IN THE SLIMLINE AND COLD CATHODE LIGHTING FIELD

Due to the foresight of the "IEC" they have designed and developed these modern Slimline and Cold Cathode straight lamp fixtures along with Cold Cathode Hairpinline light fixtures over three years ago.

With our study and experimental work we came out in the middle part of 1944, three years in advance of any other lighting company, to bring you these new and modern fixtures, which have revolutionized the lighting industry.

With our specially designed adjustable end plates our line of straight lamp fixtures is the only fixture on the market today that can be readily used with either the Slimline or Cathode lamp. (Pat. Pending.)

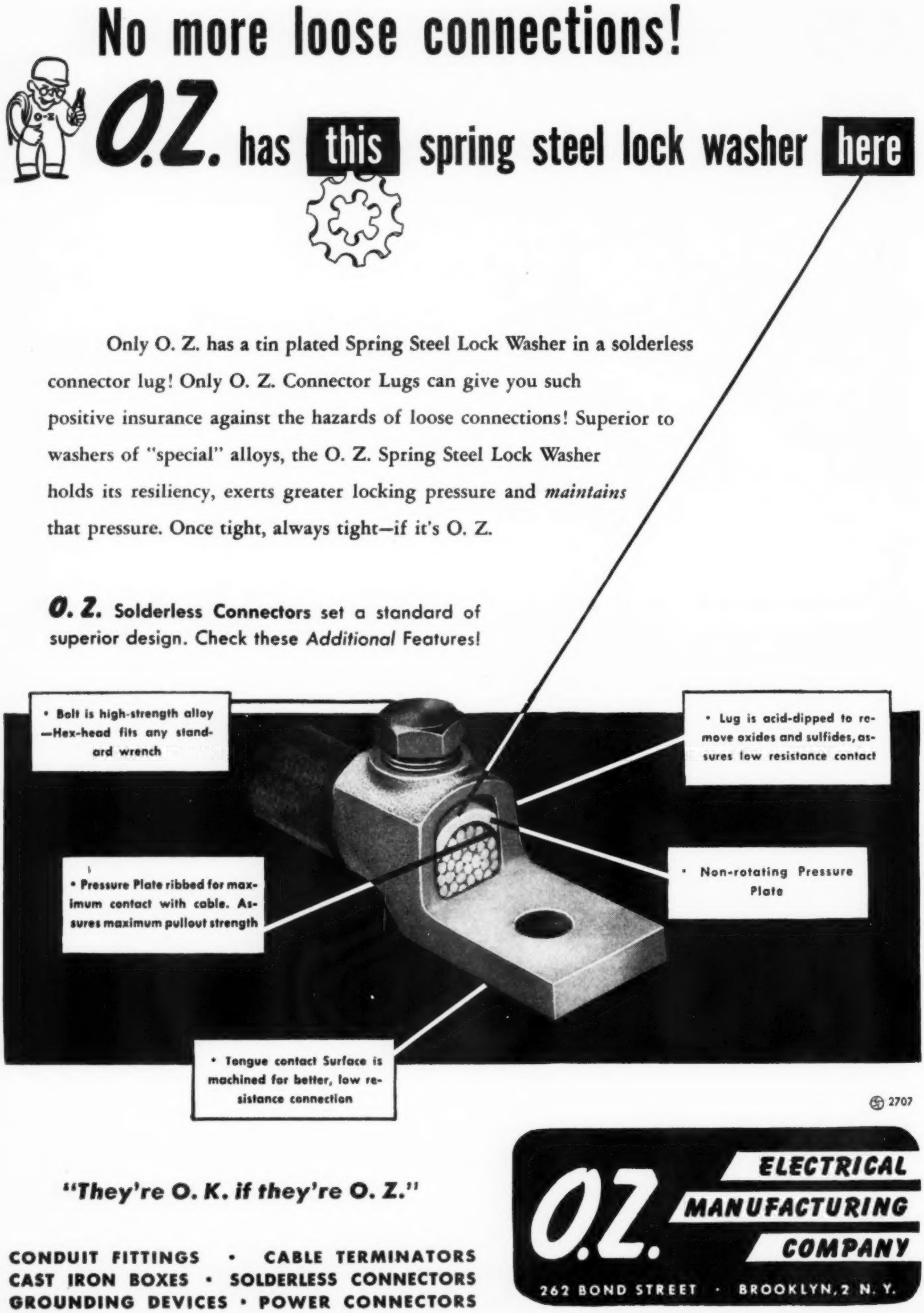
These units are also designed so that all unsightly sockets are concealed and the lamps can be easily removed or replaced without removing any parts of the fixtures, thus eliminating one eyesore that has always been a detriment to this type of lighting units.

These fixtures are also considered by contractors to be one of the simplest fixtures to install. This has been accomplished with the use of our specially designed hanger arrangement. (Pat. Pending.)

Illuminating Engineering Co.

2347 E. NINE MILE ROAD • HAZEL PARK, MICHIGAN

ENGINEERED LIGHTING • THE MODERN WAY TO CORRECT LIGHTING



No more loose connections!

O.Z. has this spring steel lock washer here

Only O. Z. has a tin plated Spring Steel Lock Washer in a solderless connector lug! Only O. Z. Connector Lugs can give you such positive insurance against the hazards of loose connections! Superior to washers of "special" alloys, the O. Z. Spring Steel Lock Washer holds its resiliency, exerts greater locking pressure and *maintains* that pressure. Once tight, always tight—if it's O. Z.

***O. Z.* Solderless Connectors** set a standard of superior design. Check these *Additional* Features!

- Bolt is high-strength alloy—Hex-head fits any standard wrench
- Lug is acid-dipped to remove oxides and sulfides, assures low resistance contact
- Pressure Plate ribbed for maximum contact with cable. Assures maximum pullout strength
- Non-rotating Pressure Plate
- Tongue contact Surface is machined for better, low resistance connection

2707

"They're O. K. if they're O. Z."

CONDUIT FITTINGS • CABLE TERMINATORS
CAST IRON BOXES • SOLDERLESS CONNECTORS
GROUNDING DEVICES • POWER CONNECTORS

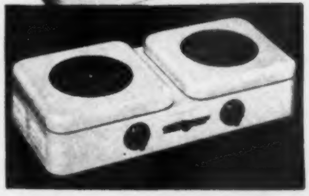
O.Z. ELECTRICAL MANUFACTURING COMPANY
262 BOND STREET • BROOKLYN, 2 N. Y.

DISCOVER *Big Profits With These* NEW PLANETS!!

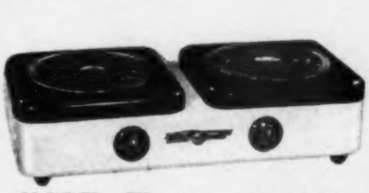
PLANET PORTABLE ELECTRIC STOVES

There's a PLANET Portable Electric Stove for every need. Ideal for apartments, trailer homes, summer cottages, luncheonettes, laboratories and many others. These new models have the features that make quick sales, and they're priced low, so you can merchandise them aggressively NOW! Get your share of the profits in this big field . . . mail the coupon for complete details and price list.

MODEL ARB


MODEL ARW

MODEL ARB, Black Top (Model ARW, White Top) vitreous porcelain-enamel. Split top arrangement (Pat. Pend.) for cooler, more efficient operation. Three heat controls—200, 400, 800 Watts. Overall dimensions 20½"x10½"x5".



MODEL CR, New Chromolox triangular type heating elements—same as used in full size stoves. Three heat controls—312, 625, 1250 Watts. Hinged heating elements and removable drip pans, for quick, easy cleaning.

ELECTRIC STOVES

Distributed exclusively through wholesale channels by

MANUFACTURERS MARKETING CO.
ROLLAN SALES CO. GOLBUS SALES CO.

Individual Surface Mounting
Continuous Surface Mounting
May also be mounted Pendant, Individual or Continuous

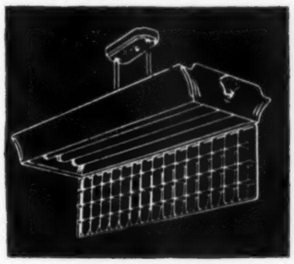
PLANET FLUORESCENT LIGHTING FIXTURES

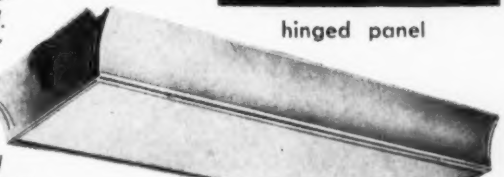
MODEL 4-40 L—
4 Lamp Fixture with louvre diffusing unit, Overall dimensions 49¼"x17⅛"x 6⅝". hinged for easy maintenance.

MODEL 2-40 L
2 Lamp Fixture with louvre diffusing unit, hinged for easy maintenance. Overall dimensions 49¼"x14⅛"x6⅝".

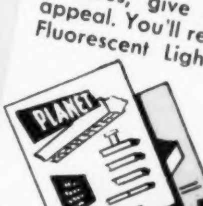
MODEL 4-40 GL
4 Lamp Fixture with glass diffusing panel, framed and hinged. Overall dimensions 49¼"x17⅛"x6⅝".

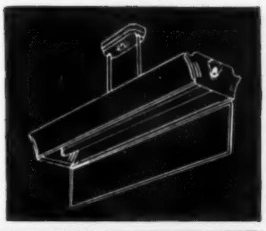
MODEL 2-40 GL
2 Lamp Fixture with glass diffusing panel, framed and hinged Overall dimensions 49¼"x14⅛"x6⅝".


hinged panel



Capitalize on the increasing demand for modern fluorescent lighting! Top quality materials and exacting standards of workmanship, plus many exclusive features, give the PLANET line real sales making appeal. You'll realize big profits from sales of PLANET Fluorescent Lighting Fixtures. Fill out and mail the coupon today for illustrated folder and price list.





NO OBLIGATION--FILL OUT AND MAIL THIS COUPON NOW!

PLANET PRODUCTS, INC., 2633 W. Grand Ave., Chicago 12, Ill.

Please send at once (without obligation on my part) full details and price list on

☐ PLANET Fluorescent Lighting Fixtures

☐ PLANET PORTABLE Electric Stoves

NAME ____________________

STREET and NO ____________________

CITY__________ ZONE_____ STATE_______

PLANET PRODUCTS, INC.
2633 W. GRAND AVE. • CHICAGO 12, ILL.

Planet Portable Electric Stoves and Fluorescent Lighting Fixtures are UNDERWRITERS LABORATORIES APPROVED.

Tri-Part FLUORESCENTS . . .

• 8000 Line. Exterior frame constructed of EXTRUDED ALUMINUM with Mitred Welded Corners. Available in 6/40, 4/40, and 6/20 units. Arrangements for continuous runs can be furnished.

Point the Trend

TO MODERN INDUSTRIAL AND COMMERCIAL LIGHTING WITH A GOOD SALES FUTURE....

The trend is most decidedly for FLUORESCENT lighting and TRI-PART is the line for you to tie up with for good sound business. The four types shown are just part of our very complete series. TRI-PART Units are A. F. of L. and U. L. approved. We would like to discuss with you the merits of our line of Fluorescent Units, and also send you our descriptive catalog which gives all details of construction and applications. Investigate TRI-PART—the line of Fluorescents with a good sales future.

• 4404 Line. Recommended for window lighting. Available in 4/40 and 4/20 units. Provided for continuous installations.

• 3202 Line. Recommended for bowling alleys or for window lighting. Available in 2/40 only. Provided for continuous installation.

• 9004 Line. Available in 4/40 units. Arrangements for continuous runs can be furnished.

TRI-PART MANUFACTURING COMPANY

934 PLUM STREET . . . DETROIT 1, MICHIGAN

Flexible Lighting Plan Permits Effective Showroom Demonstration

USING light to sell light can be just about the most effective tool in the sales kit and special consideration should be given to this in the modernizing and relighting of showrooms by electrical wholesalers and their dealers.

Lighting properly laid out to include various types of sources and installed so as to allow flexibility of operation gives the prospective customer concrete proof of the benefits of improved lighting through demonstration.

Particularly to the wholesaler is this important for his salesmen can bring in their contractor, industrial or commercial customers and show them actual sources in operation.

With this in mind the Rumsey Electric Company, electrical distributors in Philadelphia, recently renovated their showrooms and centered their plans around a flexible lighting installation so that several levels of intensity could be quickly demonstrated.

Flush mounted in the ceiling are twenty-two fluorescent units using six 40-watt lamps each, one unit using three 40-watt lamps, fifteen incandescent spot lamps of the focusing type using 250-watt, G-30 lamps and five incandescent units using 300-watt medium base lamps; the spot lamp units being installed between the continuous run fluorescent fixtures.

The installation is such that a single lamp in the continuous run can be turned on and will produce approximately 36 foot candles, two lamps in the run will produce approximately 60 foot candles and with all three lighted an overall intensity of about 90 foot candles is secured.

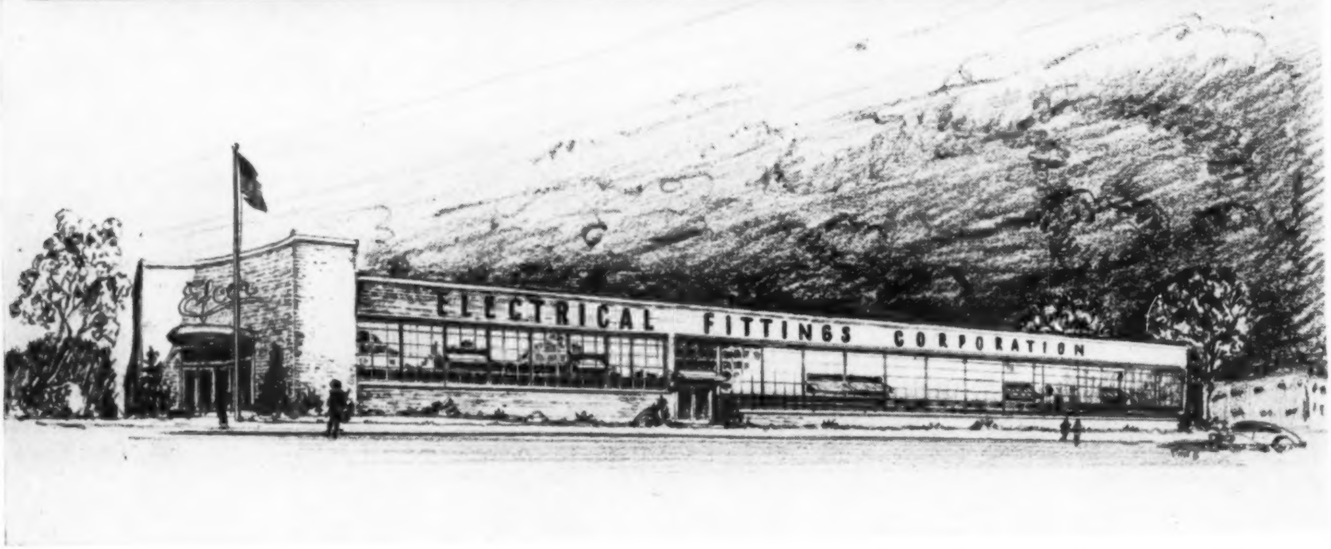
Use of the spot lamp units is of great interest to the merchandising accounts of the company for their use permits high-lighting of displays or articles to a greater intensity than the overall intensity in the store and two or three can be concentrated at one time on one spot for high-lighting a single article. Intensity under the individual spot units is about 125 foot candles.

At the rear of the store are regular incandescent units with a fixed focus to give spread distribution and which are used to demonstrate to the prospective customer this type of incandescent fixture when used in combination with fluorescent lighting.

In addition to the new lighting installation the store was repainted with the ceiling an off-white, the upper walls a light green, the upper show cases a middle green, and the lower show cases and lower counter a darker green.

Ingenious lighting installation in sales and showroom of the Rumsey Electric Co., electrical distributors in Philadelphia, allows flexibility of operation so that various foot candle levels and sources of light can be effectively demonstrated to prospective customers.

Efcor ANNOUNCES...



A New and Larger Plant

to better serve the Industry

EFCOR PRODUCTS INCLUDE

- Locknuts & Bushings
- Connectors
- Grounding Bushings
- Ground Fittings
- Straps
- Conduit Nipples
- 3 Piece Conduit Couplings
- Service Cable Fittings
- Entrance Caps & Ells
- Short & Long Telephone Elbows
- E. M. T. Fittings
- Fixture Extensions
- Reducing Bushings

Write for Our Catalogue

THIS new Efcor plant is the result of just one thing — the APPROVAL of Efcor Products and Service by the Electrical Industry. No Company grows unless it gives the trade what it WANTS in the way of QUALITY and DEPENDABILITY at a fair PRICE. Today, with more than twice the space and greatly augmented facilities for the manufacture of an increased variety of products, we are better than ever equipped to give you more value for your money — dependable products that insure greater profits through the good will of customers satisfied by a well done job.

Efcor Products sold exclusively thru electrical wholesalers

note our new address:

ELECTRICAL FITTINGS CORPORATION
37-50 57TH STREET, WOODSIDE, N. Y.

REWIRE AND RELIGHT AMERICA
adequately

50 Years of Accomplishments Under the National Code

The National Electrical Code prescribes a minimum standard for electrical installations that assures safety to life and property. In this article Mr. Coggeshall reviews the interesting history of the Code as it stands today and illustrates its flexibility to meet conditions as they arise

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By Allen Coggeshall*

Treasurer and Secretary
Hatzel & Buehler, Inc.

IN 1881 ". . . there were 65 installations of electric lighting in the mills insured by the Manufacturers' Mutual Insurance Companies of New England which were followed by 23 fires in six months, presenting a most hazardous and alarming conditions of affairs."

C. J. H. Woodbury, chief engineer of the Factory Mutual Insurance Companies, who made this statement, together with Dr. Charles F. Brush, Prof. Elihu Thomson, Thomas Edison, Mr. Hockhausen, Edward Weston and others, investigated to determine what could be done to minimize electrical hazards. So marked were their accomplishments that fires were almost entirely eliminated, though the number of installations increased considerably and their findings led to the first rules which applied only to installations in textile mills. Later, rules were formulated for more general application.

THE NEED FOR A NATIONAL CODE

The National Electric Light Association, using as a basis these rules, called a meeting in 1890 to formulate rules that would be universal in their scope. Representatives of insurance, light and power and manufacturing companies took part and formed an organization known as the National Electro-Insurance Bureau to formulate rules for "Safe and Economical Wiring" and for "Proper Inspection and Maintenance."

Other 'Codes' were also made, The National Board of Fire Underwriters had one, the Underwriters National Electric Association had one, and by the end of 1895 there were five different Codes in use in the United States.

Five different Codes meant five different sets of rules for making an electrical installation. This, of course, created confusion and no end of controversy. Something had to be done on a national scale to produce a "National Code."

To accomplish this, several national organizations held a meeting in New York on March 18, 1896, and called itself "Joint Conference of Electrical and Allied Interests." At this conference the five American Codes, together with the German Code, the Code of the British Board of Trade and the Phoenix Rules of England, were discussed and referred to a committee headed by Prof. Francis B. Crocker of Columbia University.

The committee selected the most suitable rules of all, printed them and sent them to 1,200 interested persons in the United States and Europe for comment. The Conference met again in May and in June of 1897 worked up a Code that was unanimously approved and which became the "National Code." It was so fair and broad in its application that it was adopted by the National Board of Fire Underwriters in substitution for its own, and issued by it as the "National Electrical Code of 1897." It was a booklet of 56 pages which has since grown to about 400 pages. The number of rules were around 350 and now exceed 2,000.

Subsequent meetings were held by the conference and modifications were made, as they became necessary, through experience. These rules were widely followed and were looked upon almost as "laws."

At a meeting in 1905, the Associated Edison Illuminating Companies, the National Electrical Contractors Association and the International Association of Municipal Electricians applied for membership and were accepted.

At the 1906 meeting, the National Electrical Inspectors Association, and others, were accepted. Also at this meeting, the "National Conference" became a permanent organization—the "National Conference on Standard Electrical Rules."

NECA'S QUESTIONNAIRE IN 1907

In 1907, President McCleary of NECA requested a "recodification of the Code . . . as a step toward uniform interpretations." He said

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**Excerpts from a series of articles which appeared in the magazine "Qualified Contractor" under the title "Fifty Years of Making a National Electrical Code—Historical Note."*

FIFTY YEARS' GROWTH OF NATIONAL ELECTRICAL CODE

Code Date	*Total pages*	*Definitions*	*Tables*	*Diagrams*	*Examples*	*Rules & Recommendations*	*Pages Index*
		(Approximate Number of)					
1897	56	0	4	0	0	340	4
1899	67						
		—Size of Code 3½" x 5½"—1897-1920					
1901	80						
1903	107	—Supplements to 1903 Code issued 1904: Car Wiring Supplement—14 pages Enclosed Fuse Supplement—9 pages					
1905	139						
1907	153						
1909	174	—Code published in two parts: Installation Rules—102 pages Construction Rules—72 pages					
1911	190	—National Fire Protection Association assumed sponsorship of Code					
1913	205						
1915	224						
1918	205	—Pages reduced by condensing text					
1920	216						
1923	182	—Size of Code Booklet changed from 3½" x 5½" to 4" x 6¼".					
1925	182	30	28	0	0	900	10
1928	250	47	45	13	2	1200	12
1930	256	46	48	13	2	1230	12
1931	282	49	45	14	4	1330	12
1933	304	62	43	14	3	1450	12
1935	318	62	47	14	3	1500	13
1937	334	81	50	14	6	1900	15
1940	360	85	58	15	5	1975	14
1947	400	75	64	20	6	2025	

that the request was based on the results of replies to a questionnaire sent to the Association's membership. Replies were received from 139 cities in 35 States. The questions were:

Do you have inspections? Do inspectors' views differ from requirements set forth by the Code? Does the inspection department have rules of its own? Have you municipal inspections? Are the contractors licensed? Are many fires attributed to faulty installations, and so on.

Further meetings were held in 1908, 1909 and 1911. More organizations joined. The Code came into more general use. Pioneering work had been completed. Opinions of insurance, manufacturing and electrical construction organizations were more stable on the subject. The purpose of the organization known as the "National Conference on Standard Electrical Rules" was accomplished; and it was so stated at the March 24th, 1911, meeting and was therefore dissolved. The work of periodically revising the "National Code" was undertaken by the National Fire Protection Association through its committee known as the "Electrical Committee."

The National Fire Protection Association has been faithfully sponsoring the work on the Code since 1911, and the National Board of Fire Underwriters has been printing and distributing the Code continuously. Both organizations deserve high commendation.

The first revision of the Code under the new sponsorship occurred in 1913.

In 1915, through cooperation of the National Government and its National Bureau of Standards, the phrase "Safety to Life" was given prominence in the purpose of the Code.

In 1916, the Committee Chairman informed the membership that the committee had become judicial and was ruling on Code matters precisely as judges do on the bench.

Let me here recall, that from the very first use of Code rules, it was realized that they were not law, that they had no force of authority to compel compliance, and yet their own inherent virtue was such that they created a fear to violate them; that phase has strengthened as the years have gone along and the fear to violate the Code has increased.

CODE IS AN AMERICAN STANDARD

In 1920 the Code made another advance by becoming an American Standard through its formal approval by the American Standards Association.

In 1922 a committee was appointed to facilitate the investigation of new developments in the electrical field in their reference to the installation requirements of the National Electrical Code.

In 1923 the Code was rearranged and re-written. The 15 ampere fuse was substituted for the 10 ampere fuse for general branch circuit application and the old 660 watt rule disappeared.

The Code booklet was increased in size to 4" x 6¼". Definitions and diagrams were included, and sections on marine wiring, electric cars and car houses were omitted.

A Transition Table for readily finding 1920 Code rules in the 1923 edition was prepared by Hubert S. Wynkoop, member of the Recodification Committee, and published and issued by the Association of Electragists, International (now NECA).

When the writer joined the Electrical Committee in 1925, as a representative of the Electrical Contractors Association, the work of revision of the Code had begun to be intensive. The main changes proposed in these early days were to secure further safeguards against injury to persons, and against fire hazards in extra hazardous locations. The Committee membership was enlarged to consist of 39 members and 20 alternates. Later, changes were made to secure better workmanship, flexibility of circuit uses and for economical methods of installation. The standing of the Committee also was enhanced by its being accepted by the American Standards Association as one of its committees on standards.

In the 1925 Code, the paragraph on trolley wires and the appendix were omitted.

In 1927 revisions were made for the 1928 Code. A section was added containing rules, also a table for motor wiring and for fusing motors and motor circuits. There were discussions on the subject of "Grounding of Electrical Appliances and Wiring Systems Within Buildings" but no definite decisions were made. There were also proposals for revising the section on "wiring."

ADOPTION OF DEMAND FACTOR

As electricity came to be used in larger quantities, especially in industrial plants and commercial buildings, requests came to the Electrical Committee for changes in the Code to permit the use of somewhat smaller conductors for wiring and feeders. It was pointed out that it was not very often that all of the installed lights and equipment, which constituted "connected loads," were used at one and the same time; therefore, it was considered uneconomical to install maximum sizes of copper conductors throughout buildings, incurring thereby unnecessary expense and frozen investments. To offset this, the industry proposed what came to be known as the "demand factor." The definition of "demand factor" is the ratio of the maximum demand to the total connected load.

Rules were changed, calculations and examples using the "demand factor" were worked out for installations in various types of buildings from hotels to stores, schools, garages, hospitals, residences, apartment houses and the like and incorporated in the 1928 Code.

Another provision was the set of special rules for installations of electrical equipment in premises where "hazardous atmospheric conditions" were likely to be present—such as vapors of alcohol and others which, when mixed with air in definite proportions, become explosive. Another provision was for industries wherein motors and devices were to be operated at voltages above 600. The provisions for operating at 750 and higher voltages, were framed by a sub-committee headed by Dr. Morton G. Lloyd, of the Bureau of Standards. Dr. Lloyd contributed much to the sensible development of the Code.

NEW INDUSTRY DEVELOPMENTS

Another provision was for installation of electric signs, using Neon or other inert gas tubes and operated at high voltages. Another was for X-Ray and other high frequency apparatus. Rules were developed also for "Underfloor Raceways" and "Cast-in Place" raceways; also, for the installation of "Bare-Bus-Bars" and "Risers."

At the Electrical Committee's meeting in 1930, during a discussion on observance of provisions of the Code, it was pointed out as coming from legal sources, that the National Electrical Code was observed in upwards of 2,000 communities in the United States. Today the Code is observed in almost all communities. It also was stated that, because of the rapid development in the electrical field, new methods of installation and the use of new types of equipment should be permitted even if there were no provisions for them in the latest edition of the Code, provided it could be shown that safety to life and property were assured.

A resolution was adopted permitting "interim changes" in the regulations, where adherence would improve unnecessary hardships and limitations. It also was proposed to provide for "trial installations" by new methods or with new materials and equipment if made under the supervision of authorities enforcing the Code.

CODE AS AN ELECTRICAL GUIDE

Industrial development and increased use of electricity for power purposes made it necessary to add two new sections in 1931; they were "wireways and busways" and "auxiliary gutters." Revisions were made in other sections and articles.

At the 1931 Committee hearing, the value of the Code became a topic for serious discussion. It was pointed out that the Code was more than just a set of rules and regulations for safe wiring; that it was a guide for electrical men for making installations in their homes; it was a book of instruction for students in vocational schools and for home study.

Because of the varied uses of the Code, the Committee often was confronted with the problem of what to put in and what to exclude. This type of problem for a Committee comprising men of diversified views and opinions is not easy to solve. Today we still are confronted with this type of problem from time to time. In 1931 approval was given for an article on "Grounding of All Fixed Equipment in Wet Places."

Two new chapters were added to the Code in 1933: "Polarity Identification of Systems and Circuits" and "Emergency Lighting Circuits."

By 1934, many cities and states, which had their own codes, had revised them to coincide with the National Code. California made its Code to coincide with the National Code 99 percent.

STATIC ELECTRICITY PROBLEM

In 1935, Albert T. Bell, chairman of the board of directors of the National Fire Protection Association, announced that a special committee had been appointed to consider the matter of hazards of primary electrical service installations and from its report, the directors concluded that as the National Electrical Code is presumed to cover the practical safeguarding of electrical hazards in buildings, their contents and occupants, including primary as well as secondary supply wires and related equipment, that the type of such safeguarding should be determined by the Electrical Committee; and that the Committee was so informed.

Incidentally, it may be here mentioned that as static electricity had been causing many fires and explosions, that a "Committee on Static Electricity" was appointed through which the Association hoped to learn the causes of fires and explosions, and therefrom to formulate recommendations for preventative measures which could be readily understood and applied by the layman. The Committee reported that studies were being made of methods for preventing the accumulation of static charges such as: by dissipation through increase of relative humidity, by grounding, and by the use of neutralizing agents or devices; and that a pamphlet would be prepared.

Also, in 1935, a draft of the proposed revision for the make-up of the Code was resubmitted by the Electric Light & Power Group and analyzed. Features that were commendable were adopted for inclusion in the 1937 edition of the Code. They consisted of a general editorial revision, inclusion of an "Introduction"—separate from the text, the setting of general rules ahead of details, and the changing of style of type and set-up for clarity and improvement in appearance. It was

ORGANIZATIONS SPONSORING ELECTRICAL COMMITTEE

of the

NATIONAL FIRE PROTECTION ASSOCIATION

for the

NATIONAL ELECTRICAL CODE

(1946)

American Institute of Electrical Engineers
Association of American Railroads
Associated Factory Mutual Fire Insurance Companies
Association of Mill and Elevator Mutual Insurance Companies
Electric Light and Power Group
Illuminating Engineering Society
International Association of Government Labor Officials
International Association of Industrial Accident Boards and Commissions
International Association Electrical Inspectors
International Brotherhood Electrical Workers
International Association of Building Owners and Managers
National Board of Fire Underwriters
National Bureau of Standards
National Electrical Contractors Association
National Electrical Manufacturers Association
Stock Fire Insurance Inspection Bureaus
Telephone Group
Underwriters' Laboratories, Inc.
United States Conference of Mayors
Canadian Representative (Non-Voting)
U. S. War Department (Non-Voting)

Associations for Specific Rules

American Water Works Association
American Petroleum Institute
Electric Overhead Crane Institute
National Elevator Manufacturers Industry
International Municipal Signal Association
Telegraph Group
Federal Communications Commission
Institute of Radio Engineers
Radio Manufacturers Association

PIONEER WORK TO MINIMUMIZE THE ELECTRICAL HAZARDS

(1866-1897)

1866	National Board of Fire Underwriters organized
1881	Fires from electrical installations started investigations New York Board of Fire Underwriters issued installation rules
1882	National Board of Fire Underwriters adopted above rules
1884	American Institute of Electrical Engineers founded
1885	C. J. H. Woodbury, Code pioneer, awarded 'John Scott' medal for work on safety in electrical installations. New England Insurance Exchange issued rules
1890	National Electric Light Association called a meeting to formulate electrical rules for a Code.
1891	National Electric Light Association produced a Code.
1892	Underwriters Associations produced a revised code.
1893	All underwriters adopted above Code.
1894	National Electric Light Association adopted further revisions of above Code and this was later adopted by Underwriters National Electric Association. National Board of Fire Underwriters was given the sole privilege to print the Underwriters Code.
1895	Five Codes in existence in U. S. A.
1896	'Conference of electrical interests' later named 'National Conference on Standard Electrical Rules,' called meeting to produce a 'National' Code: W. J. Hammer Chairman. Prof. Francis B. Crocker Chairman of review and action committee to study five American and two European codes. National Fire Protection Association organized.

1937 before these changes were made and it is apparent that the 1937 edition is different and is much improved. The 1935 edition, however, had the usual quota of revisions.

The request for permission to use bare neutral conductors provoked considerable discussion and resulted in the decision to permit the use of braid covered conductors for neutrals in electric range circuits.

The matter pertaining to installations of primary power equipment in vaults came up again; the chairman of the Electrical Committee made the following statement: "If I am reliably informed, there are no devices for overcurrent protection in connection with primary metering apparatus, which can be relied upon to provide the protection that would be assumed to be present. For that reason those who are concerned with having the National Electrical Code a fitting and practical instrument for the regulation of electric wiring, do not attempt to influence the public to assume they have protection, when the protection is not there. I am sure that when industry and invention is able to provide suitable overcurrent production, meeting the conditions of primary metering, the necessary overcurrent protective device will be specified." The statement was accepted, by unanimous vote for the Committee report.

WATER WORKS ASSOCIATION ACTION

In 1936, another matter came up which caused the National Fire Protection Association's Board of Directors and its Electrical Committee considerable anxiety; this was the action taken by the American Water Works Association at its convention in 1935 when it adopted a resolution revoking and rescinding any and all previous approval or sanction of the practice of grounding, electric light and power circuits, on water pipes for protective or other purposes; and notified the Electrical Committee of its action. The sudden condemnation of an old established practice in the electric lighting field, created much concern.

A special committee was appointed to work jointly with a committee of the American Water Works Association and one of the Edison Electric Institute; this joint committee later expanded until it included committees of 17 organizations. The enlarged committee was named the American Research Committee on grounding, and its purpose was to develop a technical background upon which to provide a rational basis for an engineering solution to the problem.

In the 1937 edition of the Code, the features outstanding are: the new format, the editorial change, the clear descriptions and the general rearrangement of the text resulting from suggestions made by the Electric Light & Power Group in 1935 and developed by the Electrical Committee during 1935 and 1936.

The statement which now appears in all editions, setting forth the "Purpose and Scope" of the Code, was incorporated; and also for the first time, the paragraph on "Interpretations Procedure."

The general revisions of Articles need not be stated here because the Code is so recent that most of you are familiar with the details; but it should be mentioned that the Committee's discussion on "fuses" was somewhat lengthy and heated.

The 1940 edition of the Code contained provisions for the use of "Type S" non-tamperable fuse.

The section on "Grounding" was re-edited. Thin, and newly developed insulations, on conductors, together with increase in allowable operating temperatures, were approved. Thin insulation is an important factor when additions to wiring become necessary—especially in places where the raceways are of small sizes.

Action was not yet taken on the matter of filling conduits of 50 percent of their cross-sectional areas with conductors having other than thin insulations.

In 1941 the subject of enlarging the membership of the Electrical Committee for the advisability of getting more even distribution and better balance of representation, came up for discussion.

In 1943, because men were needed elsewhere a small "Emergency" committee was appointed and given power to act in the name of the regular Electrical Committee. A supplement to the 1940 Code was issued; the amendments being mainly those required to meet war operational situations.

In 1944 the Emergency Committee had the problem of considering a number of substitutes for insulations, materials and equipment. Wiring in pre-fabricated houses was another of these matters.

A notice was sent out from Electrical Committee headquarters to men with field experience and to organizations in war work, to submit to the Committee information from their experiences in the use of substitute materials, and in emergency wiring under various conditions and situations so that advantage might be taken of that experience when revisions were being considered for the next edition of the Code. It was not possible to complete the necessary work for a 1945 nor a 1946 edition and owing to shortage of paper and delays in printing, the 1947 edition was not issued until January, 1947.

SOME 1947 CODE CHANGES LISTED

Provisions for increasing conductor sizes, or individualizing circuits, in interior wiring because of loads that are added by the attachment of lamps, radios, toasters, flat-irons and other devices or appliances, have not yet been made.

An article particularly important to contractors, 210—Branch Circuits, has been entirely rewritten.

This article has been divided into two sections; one, "General Provisions" and the other, "Specific Requirements." Branch circuits are reclassified in accordance with the maximum permitted rating or setting of the overcurrent device—which shall be 15, 20, 30 and 50 amperes. The 150 volt to ground requirement has been extended, under exceptions, to 300 volts to ground for industrial establishments; and under definite conditions for railway properties and for infra-red industrial heating.

For "continuous" loadings upon which subject we obtained new data from experience during the war, the 1947 edition of the Code will specify in Section 2116, Calculation of Load, that the unit loads shall be increased 25 percent so that the wiring system may have sufficient branch circuit and feeder capacity, to insure safe operation.

The determination of branch circuit load for show window lighting has been made optional—to be either on the basis of 1½ amperes per outlet, or 200 watts for each linear foot. Other changes in load determinations have been made along more realistic lines. This also applies to Sections 2121 and 2122 wherein ratings and overcurrent protection rules, have been improved.

CODE RULES CONSERVE MATERIAL

The way has been opened for the use of three-pole receptacles which include a prong for grounding, for certain applications — particularly laundry machines. More on this subject will be heard when Mr. Schirmer's extensive report on the general subject of grounding is received by the Committee.

Article 210 has been vastly improved and finally, in Section 2127 a table of branch circuit requirements, covering 15, 20, 30 and 50 ampere circuits, has been included which should be very helpful.

In Article 220, under "Feeders," a new table is given covering various occupancies—many of which were not previously listed, together with applicable watts per square foot and demand factors.

Table 29, Demand Loads for Electric Ranges, includes a new column for maximum demands for ranges not over 12 kw ratings. Seventy percent unbalanced load has been allowed in the computations of range feeder neutrals.

In these days of shortage of materials, one aspect of the Code should be emphasized, namely, its broadness in specification and its adaptability to meet conditions as they arise.

In purchasing conduit, we actually purchase raceway space for the housing of electrical conductors. It can readily be demonstrated that the weight, and consequently the cost, per square inch of raceway space decreases rapidly with increase in size of conduit. A square inch of space in ½ inch conduit costs three and three-tenths times as much as the same space in 4 inch conduit; this indicates that we should plan the installation so that the greater portion of the conduit poundage will be in the large sizes; the cost per pound being the same for large and small sizes.

For example assume a 100 ft. run for each of five 3-wire radial feeders to motor loads of 10, 20, 30, 40 and 50 amperes, respectively. If the load is to be carried by 5 separate feeders, 708 pounds of conduit will be required. If the load can be supplied from a group feeder, and with a 50 percent demand factor permissible, then only 228 pounds would be required; also the ampere-feet of copper in the two installations would be, respectively, 46,500 and 26,250.

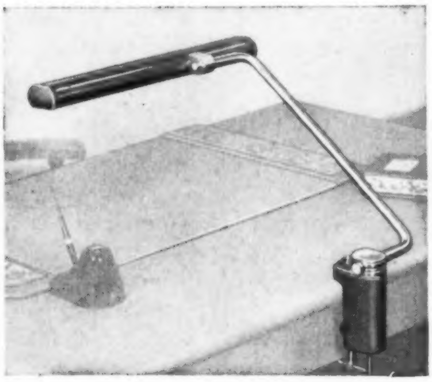
If the engineer and the contractor know the Code provisions and the nature of their problem, they can save steel and copper and thereby reduce cost.

Work on the National Electrical Code is certainly interesting and absorbing; and when it is realized that most of the work has been done voluntarily, we can feel proud of the results attained; and the growing interest of labor in the electrical field and Code, is worthy of commendation.

NEW PRODUCTS you can SELL

Lamps and Lighting Equipment

FLUORESCENT DESK LAMP



An adjustable fluorescent desk lamp which can be adjusted to any position with a mere touch of the hand. The desk lamp can be moved either vertically or horizontally and will remain in one position until moved. It can be clamped to a desk and is finished in electroplated statuary bronze and polished chromium. Faries Mfg. Co., Decatur, Ill.

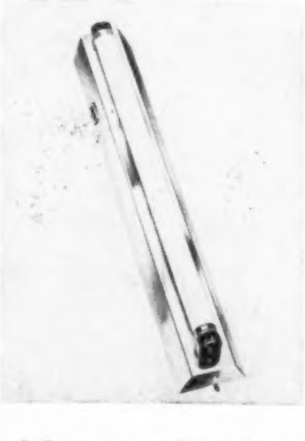
When writing mention ELECTRICAL WHOLESALING

FLOOD LAMPS

A luminaire that combines fluorescent lighting with incandescent flood lamps. It can be used for general illumination and merchandise display flood and spotlighting, and is offered in recessed and surface mounted models. Luminaires are available in lengths ranging from 48 inches to 61 inches with a 24 inch compensating, auxiliary unit to supplement continuous lines of light where space is limited. The luminaires are furnished with Alba-Lite glass. They can be used with 40 and 100 watt fluorescent lamps. All-Bright Electric Products Co., 3917-25 N. Kedzie Ave., Chicago 18, Ill.

When writing mention ELECTRICAL WHOLESALING

FLUORESCENT FIXTURE



Practical fluorescent wall bracket unit for either 14 or 15 watt lamps and designed for use in bathroom, kitchen, game rooms or special applications. Steel construction finished in chrome plate and guaranteed as rust-proof by the manufacturer. Convenience outlet optional. Mastercraft Electric Co., 181 Bruce St., Newark 3, N. J.

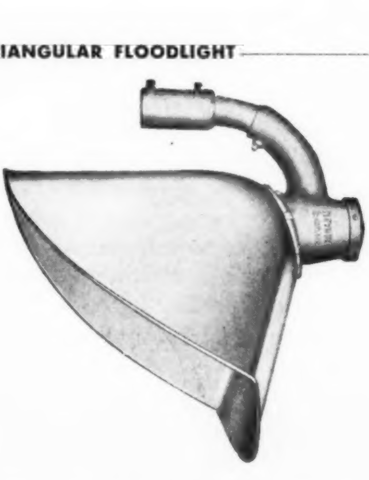
When writing mention ELECTRICAL WHOLESALING

SUNLAMP

Self-ballasting mercury vapor lamp with built-in reflector. Will operate in ordinary medium screw lamp socket on 50 or 60 cycle a.c., but a simple, adjustable holder designed for it is recommended by manufacturer. 275 watts, 110-125 volts. Westinghouse Electric Corporation, Lamp Division, Bloomfield, N. J.

When writing mention ELECTRICAL WHOLESALING

TRIANGULAR FLOODLIGHT



Floodlight throws a 90° beam pattern and keeps illumination confined to a given area. Particularly adaptable to service station floodlighting. Area covered is controlled by a telescoping arm which provides vertical coverage of 37° and a total horizontal range of 360°. All wiring enclosed. Reflector of Alzak finished aluminum. Revere Electric Mfg. Co., 6011 Broadway, Chicago 40, Ill.

When writing mention ELECTRICAL WHOLESALING

LAMP STAND

A three-purpose lamp stand that can be used as a sun, therapeutic or flood lamp. It has a patented slide fitting for easy, quick adjustment to any height without the use of any screws, thumb nuts or other attachments. The upright stem is adjustable in height from 39 inches to 60 inches measured from the bottom of the shade to the floor. The heavy base is 10½ inches in diameter. The arm extension is 18 inches to the end of the shade. The shade is 8⅝ inches in diameter and 5 inches deep. Stand is equipped with a porcelain socket with a feed through switch and 9½ foot cord set. The base, upper stem and shade is finished in black ripple and the rest of the stand in polished chrome. Faries Mfg. Co., Decatur, Illinois.

When writing mention ELECTRICAL WHOLESALING

HEAT RAY LAMP

FLUORESCENT FIXTURES—A fluorescent fixture for the kitchen. Designed for efficiency, it is glass enclosed, has modern styling. Leader Electric Mfg. Corp., 6127 N. Broadway, Chicago 40, Ill.

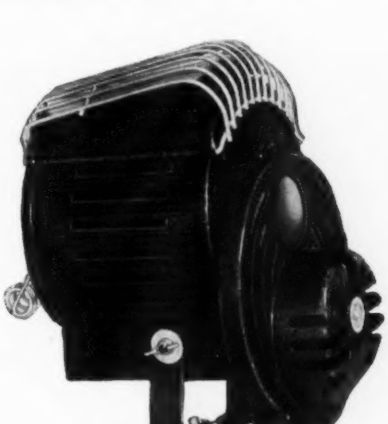
An infrared heat ray lamp which can be operated from an ordinary standard voltage household light socket. Specifications include: 250 watts; 110-125 volts; bulb is R-40 red glass with reflector; medium screw base; maximum overall length 6⅞ inches. Westinghouse Lamp Division, Westinghouse Electric Corp., Bloomfield, N. J.

When writing mention ELECTRICAL WHOLESALING

BALLAST

Ballast for instant-starting operation of the Slimline Mazda F lamps is offered in either single-lamp or Tulamp models for operation at 100 or 200 milliamperes. It is of the high-voltage type and does not require separate starting equipment. This unit is housed in two-way lead cases allowing the leads to be brought out either the end or the bottom and permitting greater flexibility of installation. General Electric Co., Schenectady 5, N. Y.

SPOTLIGHT



A 500 watt spotlight combines the attraction of light, color and action in one compact, safe, simple unit. It is recommended for use in store windows, product displays, exhibits, conventions, lobbies, theatres, ballrooms, night clubs, etc. It features an ever-changing symphony of colored light by completely automatic action, with fully enclosed mounted color wheel providing the color changes. The size of the light beam is readily adjustable from a powerful, concentrated spot to a flood in a continuous variation. It has a positive tilt adjustment and can be relamped from the top without removing the wheel. The spotlight uses 200 to 500 watt medium prefocus base lamps. Dimensions: 10 inches long, 13 inches high and 8 inches wide. Operates on 110 volts 60 cycle a.c. current. GoldE Mfg. Co., 1214 W. Madison St., Chicago 7, Illinois.

When writing mention ELECTRICAL WHOLESALING

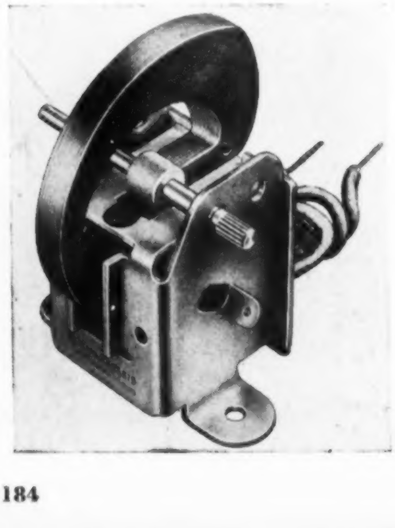
Motors and Control Equipment

VERTICAL TRI-CLAD MOTOR

A hollow-shaft vertical induction motor available in ratings from 1 to 500 hp. and all speeds and frequencies. It is suitable for use on irrigation projects, deep-well turbine pumps, municipal and industrial water supply projects, mine dewatering pumps and process industry liquid pumps. Motors 10 hp. and larger have system of controlled lubrication. Bearings, punchings and windings are cooled by a double-end ventilation system. A protective "self-release" coupling prevents damage to the pump or motor caused by motor reversal. Rotor windings in all ratings provide suitable starting torque with the low starting current needed for full voltage starting. General Electric Co., Schenectady, N. Y.

When writing mention ELECTRICAL WHOLESALING

SOLENOID MOTOR



This motor operates as a solenoid except that it rotates through 180 degrees. According to the manufacturer, the motor produces torque instead of a thrust and consequently eliminates the necessity of connecting linkages. The armature is designed to maintain a constant heavy-duty torque throughout its entire 180 degree travel. The entire unit is self-contained and is approximately 2½ inches by 2⅝ inches and 3¼ inches in height. It weighs ten ounces. The motor was designed for the operation of radio tuning units and can be applied in many fields ranging from electro magnetic values to adding and calculating machinery. Radio Condenser Co., Camden, New Jersey.

When writing mention ELECTRICAL WHOLESALING

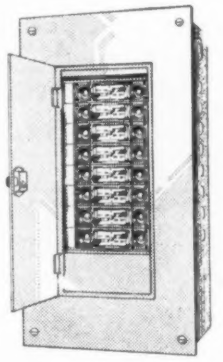
SYNCHRONOUS MOTOR

Cramer
SYNCHRONOUS MOTOR
PATENTS PENDING
VOLTS
CY.
RP
SH.
THE R.W.CRAMER CO. INC.
CENTERBROOK CONN
MADE IN U.S.A.

A small, precision built, self-starting synchronous motor designed for applications which require a constant speed at a given frequency such as: timing devices, recording instruments, communications equipment, traffic controls, heating controls and signaling systems. Dimensions: 2⅜ inches by 2⅛ inches by 1½ inches. Uses 2.7 watts at 115 or 230 volts, 60 cycles. Speeds range from 60 r.p.m. to one revolution in 24 hours. R. W. Cramer Company, Centerbrook, Conn.

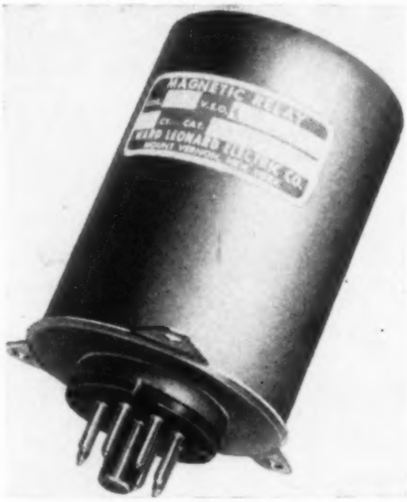
When writing mention ELECTRICAL WHOLESALING

PANELBOARD



Designed with built-in heavy duty toggle switches for individual circuit control, this panelboard is available in flush and surface mounting types, ranging from 4 to 40 circuits. Features are snap-action, double-break switch with self-aligning blade and current carrying parts of extra heavy gauge to carry the full rated 30 ampere current. Wadsworth Electric Mfg. Co., Inc., Covington, Ky.

PLUG-IN RELAYS



Plug-in relays, designed for a.c. or d.c. operation in small radio transmitters, aircraft control circuits, etc., are available in contact combinations to double pole, double throw with a.c. contact ratings of 4 amperes, from 0 to 115 volts and d.c. contact ratings of 5 amperes from 25 to 115 volts. These compact midget type relays are said to provide protection against adverse atmospheric conditions such as moisture, dust, gases, corrosion, etc. Ward Leonard Electric Co., 31 South St., Mt. Vernon, N. Y.

Testing and Indicating Equipment

TEST INSTRUMENT

An ultrasonic materials tester designed to indicate voids, cracks, porosity, laminations, poor bonds and other internal flaws in metals, plastics and ceramics. The tester sends a beam of ultrasonic waves through the specimen being tested. Changes in the amount of energy transmitted through the specimen are an indication of the presence and extent of flaws according to the manufacturer. The tester is portable and self-contained, easy to use and provides a direct reading. General Electric Company, Schenectady, N. Y.

When writing mention ELECTRICAL WHOLESALING

TEST INSTRUMENT

"Test-L-Amp," a combination electrical testing instrument and screwdriver permits house and commercial currents, appliances and electric fixtures as well as automotive spark plugs to be tested with one hand. A neon bulb housed in the plastics case lights up to indicate electrical current. Tool steel shank of screwdriver is covered with a plastic insulating sleeve. Allaire Associates, 11 Commerce St., Newark, N. J.

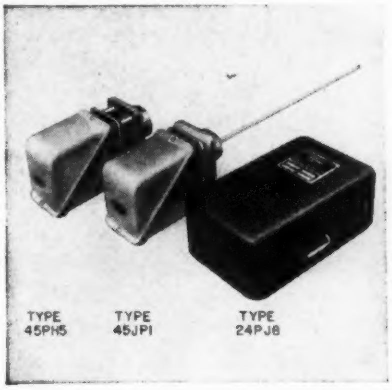
When writing mention ELECTRICAL WHOLESALING

PANEL METERS

A line of a.c. and d.c., 2 inch and 2½ inch panel meters. Two round cases and one rectangular case are available in a.c. and d.c. ammeters, a.c. and d.c. milliameters, a.c. and d.c. voltmeters and resistance meters. All d.c. meters are polarized-vane, solenoid type; a.c. meters are double vane, repulsion type. Dials are metal, age and moisture resistant, and lithographed in black and white for high visibility. The meters feature sturdy coil frames with attached insulators, concealed coils, full-view scales, attractive styling and finish. All models are flush-mounting type of black enameled brass construction. The meters are guaranteed against defective workmanship or materials for one year after date of purchase. Shurite Meters, New Haven 8, Conn.

When writing mention ELECTRICAL WHOLESALING

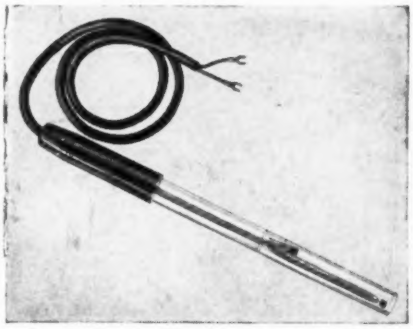
FLAME FAILURE SAFEGUARD



This photoelectric flame failure safeguard is designed to protect against the hazard of explosion caused by flame failure in industrial oil burner installations. The new safeguard provides protection against this danger by instantly turning off the fuel supply and the burner. The photo-electric scanner is compact in design and readily installed on the burner plate either at the time of assembly of the original burner equipment or upon installation in the field. Since the scanner contains both the phototube and amplifier tube, no special shielded cable is required between the scanner and programming control. The photoelectric system is designed to withstand conditions of relatively high ambient temperature and is impervious to ambient humidity. Combustion Control Corporation, 77 Broadway, Cambridge 42, Mass.

When writing mention ELECTRICAL WHOLESALING

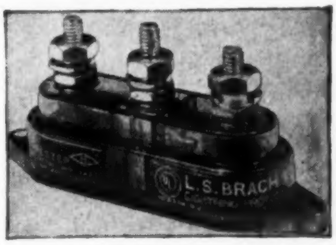
CELL



Designed to meet the need for a conductivity cell that can be readily and safely immersed in a vat or tank, and just as readily withdrawn after readings have been taken, this cell is shaped like a glass wand and has a hard-rubber handle. The glass body measures approximately one inch outside diameter by 20 inches long, and the electrodes are of platinized platinum. The cell is provided with heavy rubber-covered leads, and is available in a wide range of cell constants. Industrial Instruments, Inc., Jersey City 5, N. J.

When writing mention ELECTRICAL WHOLESALING

LIGHTNING ARRESTER



A lightning arrester for radio which makes use of a highly sensitive rare gas tube in multiple with heavy conductive plates to form an auxiliary air gap. The air gaps function only when the current enters the antenna in excess of the capacity of the tube. Inductive discharges are readily taken care of by the rare gas tube. The casing has a slow burning inhibiter. Listed by Underwriter's Laboratories. L. S. Brach Mfg. Corp., Newark, N. J.

When writing mention ELECTRICAL WHOLESALING

Merchandise for Appliance

ELECTRIC WASHER

This electric washer features a new agitator which, it is claimed, will handle a 12 to 14 pound wash in approximately 30 to 40 minutes. The washing action of the agitator is horizontal; that is, it washes inward and outward from the center in all directions at the rate of 156 times per minute. Twelve agitator vanes and the central column of the agitator itself form centers of action within the water, alternately creating pressure on the outward surge and suction on the inward surge. Altorfer Brothers Co., Peoria, Illinois.

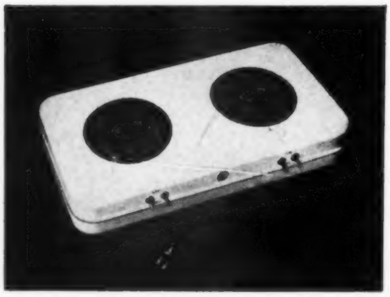
When writing mention ELECTRICAL WHOLESALING

ELECTRIC BLANKET

A new electric blanket made in two colors, cedar and blue, has approximately 55 by 74 of the 72 by 86 inches heated by a coiled single strand wire which is placed in individually woven channels between the double warp of the blanket. The wire is completely waterproof. Additional safety factor is provided inside the blanket by six thermostats which act as a guard against overheating. The temperature control is designed so that the current cannot be turned on until a center button on the control is depressed. An audible click notifies the user when the electric blanket current is off. Landers, Frary & Clark, New Britain, Conn.

When writing mention ELECTRICAL WHOLESALING

ELECTRIC STOVE

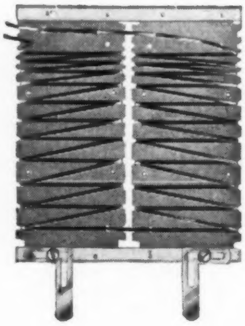


A hot plate stove with two burners that operates on either alternating or direct current. It is 20 inches in length, 10 inches in depth and $4\frac{1}{2}$ inches in height. It is finished in white enamel baked on steel. Each burner contains two 400-watt heating units equipped with switches to give high (800-watt) and medium heats. The burners may be used separately or together. General Aviation Equipment Co., Inc., 2 East End Ave., New York 21, N. Y.

When writing mention ELECTRICAL WHOLESALING

TOASTER ELEMENT

A new type adjustable clip makes this toaster heating element adaptable to all standard frame toasters in use today, according to the manufacturer. It is built of die cut mica, wound with flat ribbon Nickelchrome alloy resistance wire. A metal reinforcing strip on top and bottom gives extra strength. Specifications are: 110-120 volt, 475 watt. It comes packed in separate envelopes with replacement instructions. H. W. Tuttle & Company, Adrian, Michigan.



When writing mention ELECTRICAL WHOLESALING

ELECTRIC RANGE

This heavy duty electric range features a cook top combination that allows ten different arrangements of French plates, griddles and circular burners. The French plate measures 12 inches by 24 inches, while the griddle is available in either the 12 inch by 24 inch or 24 inch by 24 inch size depending on the combination preferred. The oven, which is 23 inches wide, 29 inches deep and 13 inches high, is equipped for three shelf positions. Extra sections such as broiler or shelf can be added to the range if desired and the uniform construction of the unit permits harmonious addition of ranges as the need for expansion arises. Associated Products, Inc., Akron, Ohio.

When writing mention ELECTRICAL WHOLESALING

Dealers

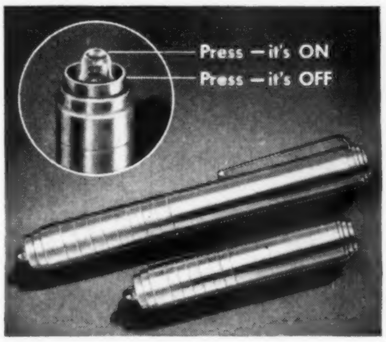
ELECTRIC TOASTER

An electric toaster that allows toast to be inspected without interrupting the toasting cycle. It has a specially devised lever separate from the regular lever which controls the toasting process. The toaster is finished in gleaming chromium. Base and handles are made of rounded bakelite, brown mottled finish. Current is turned on when starter handle is depressed. Landers, Frary & Clark, New Britain, Conn.

When writing mention ELECTRICAL WHOLESALING

STEAM IRON delivers a protective sheath of steam from heel to tip, between iron and fabric, by means of the three-way grooves in the sole plate. "Duolectric" Steam Iron. Silex Co., Hartford 2, Conn.

POCKET FLASHLIGHT



A pocket flashlight that is lighted by pressing the bulb and turned off by pressing a release ring through which the bulb protrudes. It is styled like a pocket pen or pencil and is available in two models: The "pen" style, a two-cell pocket light with clip, and the midget one-cell purse light for handbag or vest pocket. Purse model is offered in colors as well as highly-polished table silver finish. Lennan Lights, Inc., 231 Olive Avenue, Burbank, Calif.

When writing mention ELECTRICAL WHOLESALING

HOT WATER HEATER

An electric portable hot water heater made of heavy chrome plate over brass shell. It is light in weight, compact and can be carried in a handbag when traveling. According to the manufacturer, the heater can heat a basin of water in two minutes. It is precision built and guaranteed for one year. Electric Heat Appliance Co., Adrian, Michigan.

When writing mention ELECTRICAL WHOLESALING

INTERCOMMUNICATION SYSTEM

An inter-department communication system which permits instant communication between points as far apart as 2000 feet. This system operates on either a.c. or d.c. current. A "silent feature" shuts out all noise in the vicinity of stations which, according to the manufacturer, enables personnel within a 25 foot radius of a unit to answer without leaving their work. The cabinets match most modern office furniture. Worner Electronic Devices, Rankin, Ill.

When writing mention ELECTRICAL WHOLESALING

MILK HOUSE HEATER

Designed for use in milk houses or dairy plants, this electric heater distributes fan circulated heat free of dust or dirt. The heating element is insulated and enclosed and imbedded within a finned aluminum casting. There are no hot wires or glowing resistors. Heater is 13 inches high, 11½ inches wide and 11¼ inches deep. It can be easily mounted on wall or ceiling supports, and a suitable handle is furnished for moving from place to place as desired. Electromode Corporation, Rochester 3, N. Y.

When writing mention ELECTRICAL WHOLESALING

ELECTRIC LAWN MOWER

An electric lawn mower powered with a precision ¼ H.P. electric motor cuts forward and backward, weighs 60 pounds and has a removable handle to allow for convenient storing. Cutting blade revolves at a speed 1750 times a minute. Cutting height is adjustable. Cased in bright colored aluminum. Rumsey Mfg. Corp., Seneca Falls, N. Y.

When writing mention ELECTRICAL WHOLESALING

INTERCOMMUNICATION SYSTEM—Talk-bar, selector keys and control knobs are all at the user's fingertips. It has a volume control to regulate both incoming and outgoing calls. Operadio Mfg. Co., St. Charles, Ill.

ELECTRIC SPRAYER

An electric paint sprayer for applying paint, varnish, enamel, lacquer and stain quickly and smoothly. Sprayer has adjustable nozzle which allows spray to be adjusted. Unit is powered by a 110-220 a.c. or d.c. motor. Motor has built-in compressor which develops twenty-two pounds of free air. The motor can be carried over the shoulder by means of an adjustable strap. A large 24-ounce capacity glass jar is attached to a nickel-plated frame and spray head. Total weight of entire unit is eleven pounds. Lowell Manufacturing Co., 589 East Illinois Street, Chicago, Ill.

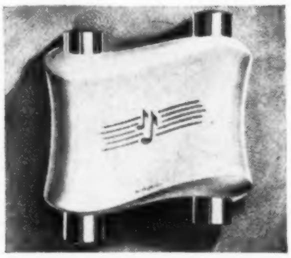
When writing mention ELECTRICAL WHOLESALING

ELECTRIC LAWN MOWER

Electric lawn mower is equipped with battery, charger and motor compactly housed in streamlined case. It will operate from two to three hours on a single battery charge and after use, is plugged into a 110-volt outlet to be recharged. The height of cut is adjustable. Handle has two controls—one starts and stops the mower, while the other disengages the wheels to give a free-running unit easily guided at turns or around obstructions. Le Jay Mfg. Co., 2900 Emerson Ave. So., Minneapolis 8, Minn.

When writing mention ELECTRICAL WHOLESALING

DOOR CHIME



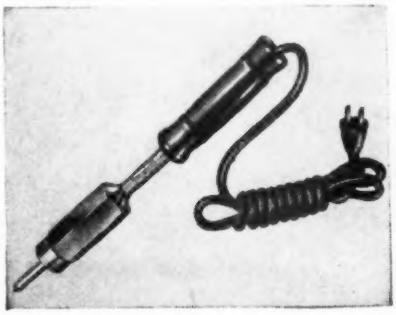
Two-note chime using the "Floating Percussion Mechanism" designed to eliminate chime static or buzz. Adjustable volume control. This "Dorset" model is 9¼ inches by 10 inches. A. E. Rittenhouse Co., Honeyoe Falls, N. Y.

When writing mention ELECTRICAL WHOLESALING

COIN-OPERATED RADIO designed for installation in hotel rooms will play two hours—not necessarily continuous—for a quarter. Electric timing device runs only when set is operating. General Electric Co., Syracuse, N. Y.

Tools

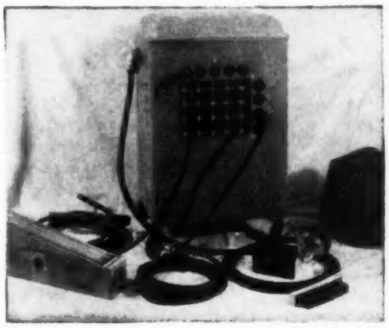
SOLDERING IRON



Industrial electric soldering iron wound for 300 watts with ⅜ inch diameter point. Heating element housed in hexagon-shaped barrel. Iron is equipped with 6 foot cord and rubber plug. Tip made of hard drawn pure copper and is replaceable. Operates on a.c. or d.c., any cycle. Catalog No. P-338. Hexacon Electric Company, 146 Clay Ave., Roselle Park, N. J.

When writing mention ELECTRICAL WHOLESALING

TRANSFORMER ARC WELDER



This general purpose transformer arc welder is designed for use on single-phase power lines of limited capacity and is available in three output ratings, 130, 160 and 180 amperes. The welder comes complete with line breaker, power cable with plug and receptacle, insulated electrode holder, electrode lead with holder and adjustment plug, work lead with ground clamp and adjustment plug, electrodes, helmet complete with lens and cover glass, wire brush and a welding instruction manual. Two striking voltages are provided: 65 volts for small electrodes on the lower half of the range; 50 volts for larger electrodes on the upper half of the range. There are Deion circuit breakers to control the flow of current to the welder and to give overload and short-circuit protection. Approved by Underwriters Laboratories. Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pa.

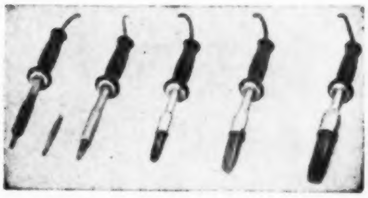
When writing mention ELECTRICAL WHOLESALING

ELECTRIC FENCE KIT

Sufficient electrical accessories for ½ mile of electric fencing (except posts and fence wire) are packaged in this kit. Contains 100 each of line insulators, leather washers, wire clips and heavy nails; as well as six corner insulators, one wire connector, one tube insulator and one electric gate handle. Electro-Line Products Corp., 120 North Broadway, Milwaukee 2, Wis.

When writing mention ELECTRICAL WHOLESALING

SOLDERING IRONS



Ranging from 75 to 300 watts in size, and available with tips from ⅜ to 1¼ inches in diameter, these new irons are designed primarily for severe and exacting soldering operations in industrial plants where fast, continuous, high quality soldering is required. Irons are made of calorized copper and stainless steel and the heating units can be easily replaced. General Electric Co., Schenectady, New York.

When writing mention ELECTRICAL WHOLESALING

FLUX

A special flux for zinc and zinc base alloys. According to the manufacturer, it can be used to solder copper, brass, steel or zinc pieces to zinc or zinc base alloys such as zinc die castings. The solder is supplied in the form of a ready to use paste in ½ pound, 1 pound or 5 pound glass jars. Superior Flux Co., 901 Public Square Building, Cleveland, Ohio.

INTRODUCING A REAL PROFIT-STAR FOR COMPETITIVE SELLING

THE NEW POPULAR-PRICED *FASCO VENTILATOR

OUTSIDE VIEW

SIDE VIEW

OFFERING NEW APPEALS FOR VOLUME SALES

"I LIKE the new FASCO ventilator . . . it removes odors and grease-laden air and dust so quickly, quietly and without drafts. The modern, white-enameled grille adds beauty to any wall . . . is so easy and simple to remove and clean. Just one control operates both outside door and fan, too."

"I LIKE the new FASCO ventilator . . . it's a high quality, efficient vent, but it's reasonably priced. Low operating cost and no maintenance, except for an occasional cleaning. No fire hazard from clogged-up ducts. Positive, weather-tight seal protects my walls."

DEALERS LIKE the new FASCO ventilator because it's amazingly simple, easy and quick to install or service. Long, trouble-free life satisfies customers. Popular price brings volume sales for multiple installation . . . kitchens, bathrooms, playrooms, nurseries, etc.

For full details see your FASCO representative or write direct

* MADE BY SPECIALISTS IN AIR CIRCULATION—MAKERS OF THE FAMOUS

ARCTICAIRE FANS

F. A. SMITH MANUFACTURING CO., INC.
ROCHESTER 2, NEW YORK

NEWS

(Continued from page 79)

struction industry was now entering the anticipated phase of price stabilization, and that the flow of materials will tend to lower cost through eliminating delays in construction.

Edward G. Gavin, editor of American Builder, referred to the divided opinion among builders, as evidenced during the preceding convention, on equipping houses in advance of sale with such appliances as ranges, refrigerators and water heaters. The electrical industry, he pointed out, will have to cope with this division of opinion in advancing the acceptance of electrical living.

Curt Mack, assistant commissioner, Federal Housing Administration, explained the manner by which eligibility of such appliances for inclusion in the mortgage is determined. He indicated that FHA, in appraising plans and specifications for homes submitted for mortgage insurance under its program, will give greater valuation to homes with adequate wiring installations provided the installation is detailed in the plans and specifications at the time they are submitted.

H. E. Seim, vice president and general manager, Bryant Electric Co., reviewed the present relationship of supply to demand for wiring materials and appliances and presented estimates as to when manufacturers expected to reach a balance in each classification. By the third quarter of 1947, Seim predicted, shortages of most electrical products will have been eliminated.

B. T. Schecher, manager, Home Planning Department, Kansas City Power & Light Co.; Burr H. Allen, manager, Adequate Wiring Bureau, Electrical Association of Detroit, and Finis F. McCoy, supervisor, Residential Service, Wisconsin Electrical Power Co., described past experience and current operations in the panel discussion on the Adequate Wiring Certification Plan. All were agreed that the current housing situation warrants immediate resumption of full-scale promotion of wiring certification.

Henry D. Edmiston, assistant vice president, National Life Insurance Company, of Vermont, discussed the advantages of the "packaged mortgage" plan as a means of financing appliance sales in new homes during the panel on electrical living. P. N. Fleck, home electrification counselor, Buffalo Niagara Electric Corporation and H. P. Fiene, director of field sales, Omaha Public Power District, supported the merits of the "packaged mortgage" approach by citing actual experiences in the successful promotion and sale of fully-equipped all electric homes in their territories.

H. E. Merrill, product promotion manager of General Electric's Wiring Devices Division and chairman of the Plan Committee of the National Adequate Wiring Bureau, opened the meeting with an address of welcome. Herbert E. Cook, Detroit Edison Company, acted as general chairman of the forum.

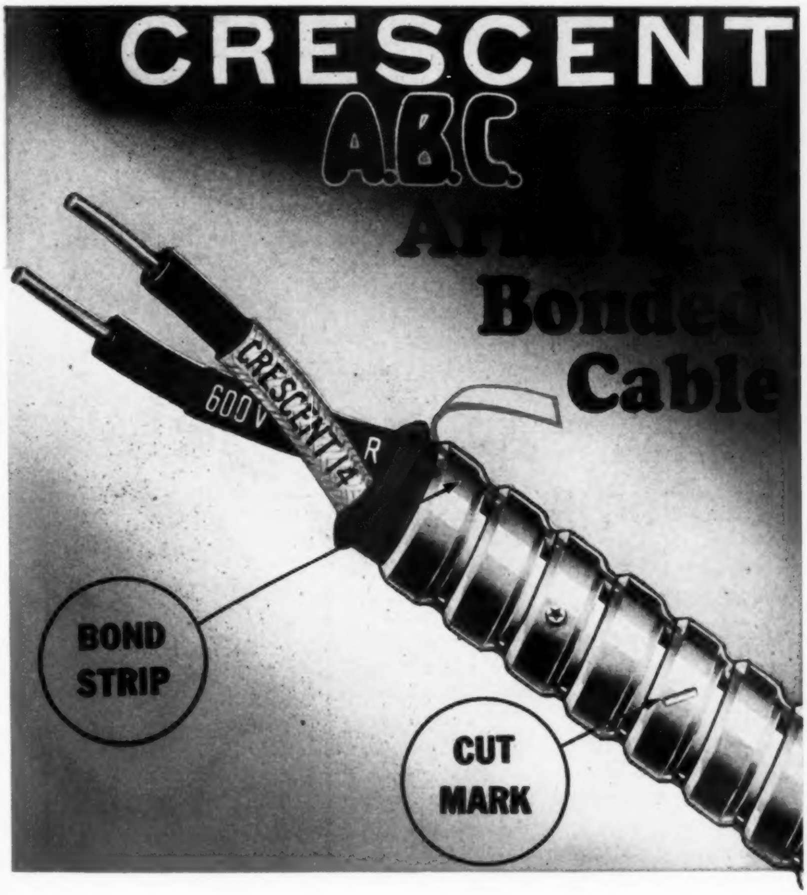
Requirements Listed for Switches, Sockets, Outlets

WASHINGTON—The Electrical Current-Carrying Wiring Devices Industry Advisory Committee met recently with officials of the Civilian Production Administration to consider the overall 1947 requirements for critical electrical wiring devices.

At the conclusion of the meeting, the national requirements for 1947 were listed as follows: Toggle switches, 64.1 million; convenience outlets (receptacles), 66.1 million; medium screw base sockets, lampholders and lamp receptacles, 141.2 million. Requirements for wall plates will match those for toggle switches and convenience outlets. The total requirement figures do not include deficits accumulated in 1946 of approximately 9.3 million toggle switches and 14.8 million convenience outlets, CPA said.

The requirements, which are chiefly related to housing, include those of the Veterans' Emergency Housing Program,

C. H. McClean has been elected a director of Graybar Electric Co., it was announced recently. Mr. McClean, who is district manager at Minneapolis, has been with the firm for 34 years. He has also served as credit manager and district manager of Graybar at Kansas City.



Has Two Outstanding Advantages

1. BOND STRIP UNDER ARMOR

Permanently low armor resistance **is provided in sizes No. 14 and 12 AWG by use of a flattened, tinned copper bonding wire which is in contact with the under side of each convolution. These sizes now are smaller and lighter, since they use the smaller diameter Type R conductors of the 1947 National Electrical Code.**

2. PREFABRICATED BREAKING LINES

The Cut Mark (at 1½" intervals) shows the location of a prefabricated breaking line inside the armor. Only a few strokes of a file guided by the Cut Mark are required to cut through one outer ridge, and a bend by hand severs the armor. This results in a clean separation with no sharp edge—a safer, easier and faster job. The prefabricated breaking lines are so designed that there is *no reduction* in tensile strength, bending quality, crushing resistance and electrical conductivity of armor.

CRESCENT
WIRE and CABLE

CRESCENT INSULATED WIRE & CABLE CO.
TRENTON, N. J.

MORE IN DEMAND
than ever before . . .
INSTANT
HEAT
SOLDERING
NEW
MODEL

IDEAL "THERMO-GRIP"
SOLDERING SET

When it comes to soft soldering or brazing of all kinds, nothing compares with the *new* Ideal "Thermo-Grip." That's a familiar fact among the trade, and it's becoming more and more well known as the Ideal advertising program goes into full swing.

Month after month, in leading trade journals and by direct mail, plumbing and heating contractors . . . refrigeration installation and service contractors . . . purchasing agents . . . production and maintenance engineers are being told that the new "Thermo-Grip" unit heats 20% faster—has thumb switch for close heat control—is modern in design—light weight—compact—portable—and can be used for long periods of time without overheating.

Tie in with this forceful sales campaign. Write for full details at once!

Distributed Through
AMERICA'S LEADING WHOLESALERS

Attachments
for handling all types of soldering jobs.

"PLIER" ATTACHMENT
For soldering applications where work may be held in jaws and heated.

"PENCIL" ATTACHMENT
For spot soldering where ground clamp may be attached to a metal part of work to complete secondary circuit.

"FORK" ATTACHMENT
For soldering in restricted spaces where straight tools cannot be used.

IDEAL INDUSTRIES, Inc.
SUCCESSOR TO
IDEAL COMMUTATOR DRESSER CO.
1047 PARK AVENUE
SYCAMORE, ILLINOIS

IDEAL

rural electrification, repair and maintenance of wiring in existing housing and essential commercial and industrial construction.

The committee agreed that these requirements could be met if sufficient phenolic resin molding compound is made available. The supply of all other materials and components needed for the production of these current-carrying wiring devices will be comparatively good this year, the committee said.

The committee expressed the unanimous view that every effort should be made to dispense with Schedule 121 to the chemicals order, M-300, or any other allocation technique relating to the distribution of phenolic molding compounds for wiring devices. It recommended that the distribution of these compounds for the rest of 1947 be left to the molding compound producers. However, the committee said, there should be an agreement on the part of these producers to supply the wiring device industry with sufficient compound to produce enough critical wiring devices to meet national requirements.

Albert A. Fox, chief of the CPA Electrical Products Branch, Building Materials Division, was government presiding officer at the meeting.

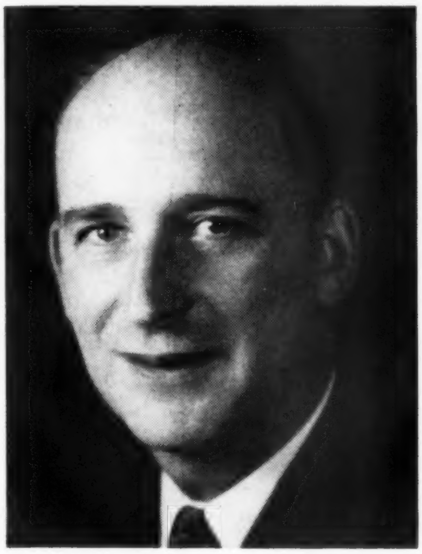
RLM Standards Institute Announces New Officers

CHICAGO.—R. W. Staud, assistant to the vice president and sales promotion manager of the Benjamin Electric Manufacturing Company, and W. F. White, manager of the Lighting Division of Westinghouse Electric Corporation, were re-elected president and treasurer respectively of the RLM Standards Institute at its annual meeting recently held at the Edgewater Beach Hotel, Chicago.

R. W. Staud

Both of these officers have served in the organization since it was formed in 1936.

L. A. Hobbs, vice president and general sales manager of the Smoot-Holman Co., was elected secretary of the RLM Standards Institute and of its board of directors. Trustees elected in addition to Mr. Staud and Mr. White included: D. J. Biller, president of Day-Brite Lighting, Inc.; E. E. Worrell, president of the Quadrangle Manufacturing Co. and H. A. Barnes, vice president and general manager of the Wheeler Reflector Company.



W. F. White

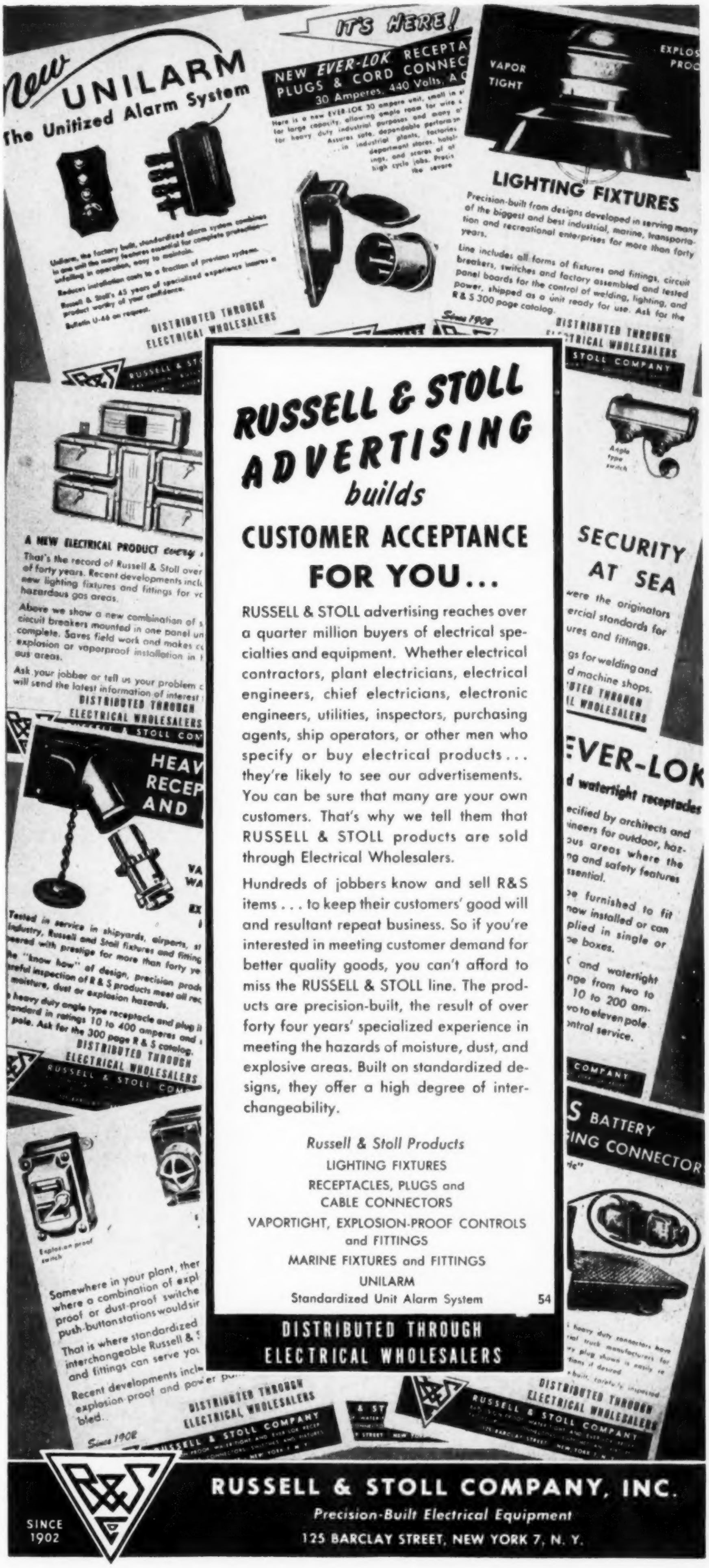
Business transacted at the meeting included members' approval of changes in present specifications and five new specifications. As a result, the Institute now has approved six specifications covering industrial lighting equipment for incandescent lamps and eight specifications for industrial lighting equipment with fluorescent lamps.

Graybar Electric Branch Moves Into New Building

LITTLE ROCK, ARK.—Officials of Graybar Electric Company and representatives of leading electrical manufacturers were on hand for the opening of the new building for the Little Rock office of Graybar at 417 Byrd Street, here recently.

The new building, which will house both offices and warehouses, is a modern one story construction with glass brick windows. About 45,000 square feet of floor space are provided in the 150 by 300 foot building.

John English is manager of the Little Rock branch. Mr. English joined the Graybar organization in 1929. H. G. Couch, formerly located at the St. Louis



New UNILARM
The Unitized Alarm System
IT'S HERE!
NEW EVER-LOK RECEPTA
PLUGS & CORD CONNEC
VAPOR TIGHT
LIGHTING FIXTURES
A NEW ELECTRICAL PRODUCT every
SECURITY AT SEA
EVER-LOK
S BATTERY
ING CONNECTOR
DISTRIBUTED THROUGH ELECTRICAL WHOLESALERS
Since 1902

RUSSELL & STOLL ADVERTISING
builds
CUSTOMER ACCEPTANCE FOR YOU...

RUSSELL & STOLL advertising reaches over a quarter million buyers of electrical specialties and equipment. Whether electrical contractors, plant electricians, electrical engineers, chief electricians, electronic engineers, utilities, inspectors, purchasing agents, ship operators, or other men who specify or buy electrical products... they're likely to see our advertisements. You can be sure that many are your own customers. That's why we tell them that RUSSELL & STOLL products are sold through Electrical Wholesalers.

Hundreds of jobbers know and sell R&S items... to keep their customers' good will and resultant repeat business. So if you're interested in meeting customer demand for better quality goods, you can't afford to miss the RUSSELL & STOLL line. The products are precision-built, the result of over forty four years' specialized experience in meeting the hazards of moisture, dust, and explosive areas. Built on standardized designs, they offer a high degree of interchangeability.

Russell & Stoll Products
LIGHTING FIXTURES
RECEPTACLES, PLUGS and CABLE CONNECTORS
VAPORTIGHT, EXPLOSION-PROOF CONTROLS and FITTINGS
MARINE FIXTURES and FITTINGS
UNILARM
Standardized Unit Alarm System 54

DISTRIBUTED THROUGH ELECTRICAL WHOLESALERS

SINCE 1902

RUSSELL & STOLL COMPANY, INC.
Precision-Built Electrical Equipment
125 BARCLAY STREET, NEW YORK 7, N. Y.

For Mother's Day
lovely
DOOR CHIMES
by RITTENHOUSE
Chimes by
RITTENHOUSE

Mother's Day
national promotion
appears in May.

Write for free newspaper mats, ad-copy and spot radio script.

RITTENHOUSE
Mother's Day and June Bride
NATIONAL MAGAZINE ADVERTISING
will reach more than
45 MILLION READERS!

Happy is the Bride
... with this lasting companion of loveliness and melody
Chimes by
RITTENHOUSE

June Bride
national promotion
appears in June.

To set a new chime-sales record, for extra volume, extra profit, and new store prestige ... *Do This:*

Go into a sales huddle with your staff;—brush up on Rittenhouse Chime facts . . . Norman Bel Geddes styling, exclusive mechanical features, appealing price range. Get your Chimes Display Board *up front*—where people can see and hear the models you stock. Start now—on a direct mailing campaign to your customer and prospect list. Use Rittenhouse Chime folders—as enclosures with invoices and statements, and on your counters. Write us for free newspaper mats, spot radio script and suggested local newspaper copy. Feature a Chime Window Display. Have your show card man attach a reproduction of Rittenhouse magazine advertisements to your interior store display cards.

Ask us for an effective sales letter to send to your prospects and customers.

Enclose a Rittenhouse Chime Folder with your statements.

Feature an eye-catching Rittenhouse Chime Window Display.

Replenish Your Stock NOW—Write or Telephone your Rittenhouse Jobber today.

THE RITTENHOUSE COMPANY, INC.
437 East Street Honeoye Falls, New York

Chimes by
RITTENHOUSE

office, has been appointed operating manager.

Representatives attending the opening from Graybar's Mississippi Valley District headquarters in St. Louis were: R. F. Janda, merchandising manager; V. A. Brown, sales promotion manager, and E. I. Funk, inside construction manager.

FHA Ready for Largest Volume of Business

The Federal Housing Administration entered 1947 with net resources of over $147,000,000 and has a current gross income of around $3,500,000 a month, Commissioner Raymond M. Foley recently announced.

Mr. Foley said that FHA is completely self-supporting and both income and assets are the largest since it was established. They represent a gain in 12 months of 19 percent over the gross income of $3,930,000 a month at the beginning of 1946 and of 12 percent over the net resources of $130,900,000 at that time.

Cumulative gross income from fees, premiums and investments from June 1934 through December 1946 amounted to $234,900,000 and operating expenses totaled $141,700,000. This left a net income for the 12½ years of $93,200,000. Net income after expenses in 1946 was $24,143,120.

Mr. Foley pointed out that FHA's resources had been built up during a period of rising prices and unusually heavy mortgage prepayments out of wartime incomes. The true test of FHA's financial strength has yet to come, he said, adding that insuring activities are now expanding rapidly and continued large mortgage prepayments cannot be anticipated indefinitely.

FOX Electrical Supply Co. is a young electrical wholesaling firm in Hollywood, Calif. The company was established last year by Joel and Leslie Fox. With five outside salesmen and two inside men, Fox Electrical Supply serves Southern California, Nevada and Arizona.

Harry W. Allen Retires From Allen Electric Co.

CLEVELAND—Harry W. Allen, one of the founders of the Allen Electric Co., an electrical wholesaling concern in this city, recently disposed of his holdings and retired from the business.

Ralph Restow, also one of the founders, became president of the company. Mrs. Libbie Restow is vice president and treasurer, Joseph Friedel, vice president and Robert H. Trenkamp is secretary. These four also form the board of directors for the company.

Ralph Restow and Harry Allen

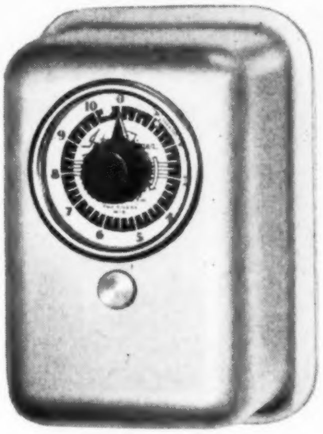
Lighting Conference Launched in Capital

WASHINGTON—With the slogan, "Everyone Wins With Better Light," the Electric Institute of Washington recently launched a Commercial Lighting Conference to assist its members in laying the groundwork for intensive promotion of better lighting. The ultimate aim of the conference is to make the Nation's Capital the best lighted city in the world, the Institute announced.

Over 150 lighting men representing manufacturers, wholesalers, dealers, contractors and the local utility attended a dinner meeting to start off the conference. R. H. Bishop, vice president and sales manager of Sylvania Electric Products Company, addressed the gathering on the subject, "Why and How to Sell Better Lighting."

The Lighting Conference will meet once a week over a six weeks' period and will present outstanding speakers in the field of illumination, covering the most important phases of light and lighting. Topics scheduled for discussion include, fundamentals of lighting, light sources, light control, lighting equipment, lighting design and selling better light.

EXTRA PROFITS *with attic and window* **fan controls** *by* **Paragon**



- **Two time ranges . . . 0 to 10 hours; 0 to 20 hrs.**
- **Telechron motored . . . quiet; no ticking, self-starting; synchronous.**
- **Underwriter's approved for 115 V. A.C., ¾ H.P. loads . . . accurate and dependable.**
- **Easy to install, direct to handy box or surface mount with conduit connection through bottom of timer.**

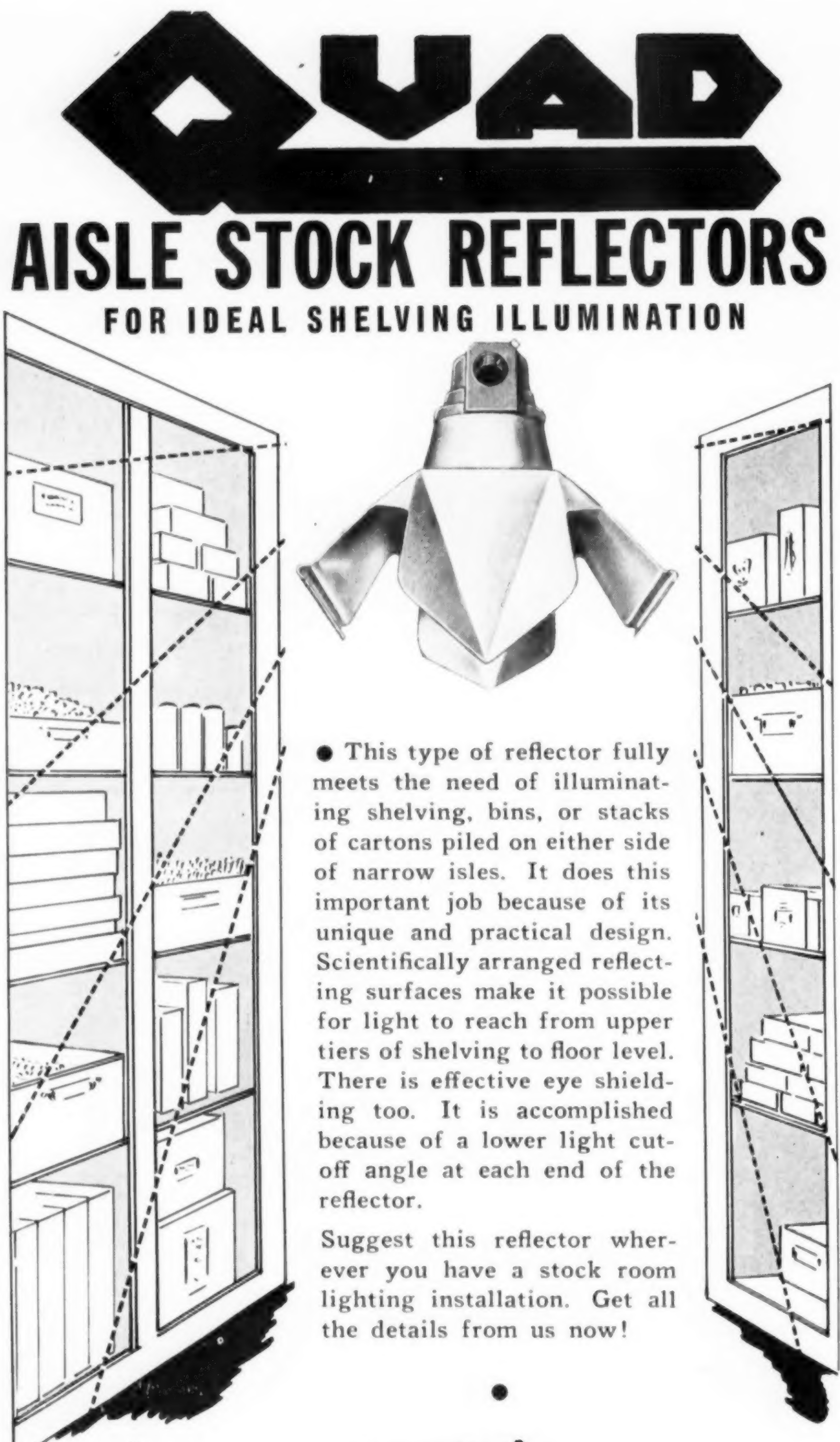
For extra profits this spring and summer, get set to install these new timers, now. They work with any A.C. fan, and the setting may be changed at will without harming the instrument. Timer motor runs only when timer is in operation.

List price only $9.75 F.O.B. Two Rivers . . . an outstanding value. Order from your jobber now . . and ask for Sales Aids.

PARAGON ELECTRIC COMPANY
1630 Twelfth Street
TWO RIVERS, WISCONSIN

"Mr. Tops" the Paragon symbol of top quality.

Paragon Two Rivers WISCONSIN
BUILDERS OF ELECTRICAL EQUIPMENT SINCE 1905



QUAD

AISLE STOCK REFLECTORS

FOR IDEAL SHELVING ILLUMINATION

● This type of reflector fully meets the need of illuminating shelving, bins, or stacks of cartons piled on either side of narrow isles. It does this important job because of its unique and practical design. Scientifically arranged reflecting surfaces make it possible for light to reach from upper tiers of shelving to floor level. There is effective eye shielding too. It is accomplished because of a lower light cutoff angle at each end of the reflector.

Suggest this reflector wherever you have a stock room lighting installation. Get all the details from us now!

QUADRANGLE MFG. CO.

32 S. PEORIA ST. CHICAGO 7, ILL.

CAPT. HOYT S. SCOTT (USNR), illuminating engineer at General Electric's Nela Park, Cleveland, was honored recently at Washington, D. C., by the Republic of China. He is shown at right in the above photo with U. S. Fleet Admiral Chester W. Nimitz and V. K. Wellington Koo, ambassador from China to the U. S. Capt. Scott was decorated with the Army-Navy Air Distinguished Service Medal of China.

CPA Issues New Rating Symbol to Drop Others

WASHINGTON—The Civilian Production Administration recently announced that another step had been taken toward the abandonment of the last remnants of the wartime priority system. Henceforth, priorities will be used only to aid the Veterans' Emergency Housing Program and the Veterans Administration hospital construction program.

The action was accomplished by the issuance of Priorities Regulation 35, which contains a new rating symbol "RR," and by changes in Priorities Regulations 1, 3 and 28.

The new regulation does not affect HH and HHHH ratings issued to housing contractors. However, no new ratings of this type are being issued.

The AAA, CC and MM ratings which have been issued to manufacturers to help them get materials and equipment are all cancelled, with the exception of those issued to producers of specified building materials.

These building materials producers may continue to use their ratings, and as they expire they can be replaced with a new RR or RRR rating. Among the firms still eligible for priority help are manufacturers of residential types of the following electrical equipment: Electric service equipment and branch circuit overload protective devices of the following kinds suitable for housing construction: Service switches of 100 amp. capacity or less; meter mounting devices such as pans, sockets, troughs and boxes; enclosures for branch circuit overload protective devices limited to eight circuits.

Also, wiring devices of the following kinds: Sockets, lampholders and lamp receptacles, medium screw base types; convenience receptacles; toggle switches; wall and face plates; outlet boxes five inches or smaller and "gem" switch boxes; box connectors for sheathed cable.

Staff Changes In East For Westinghouse Supply Co.

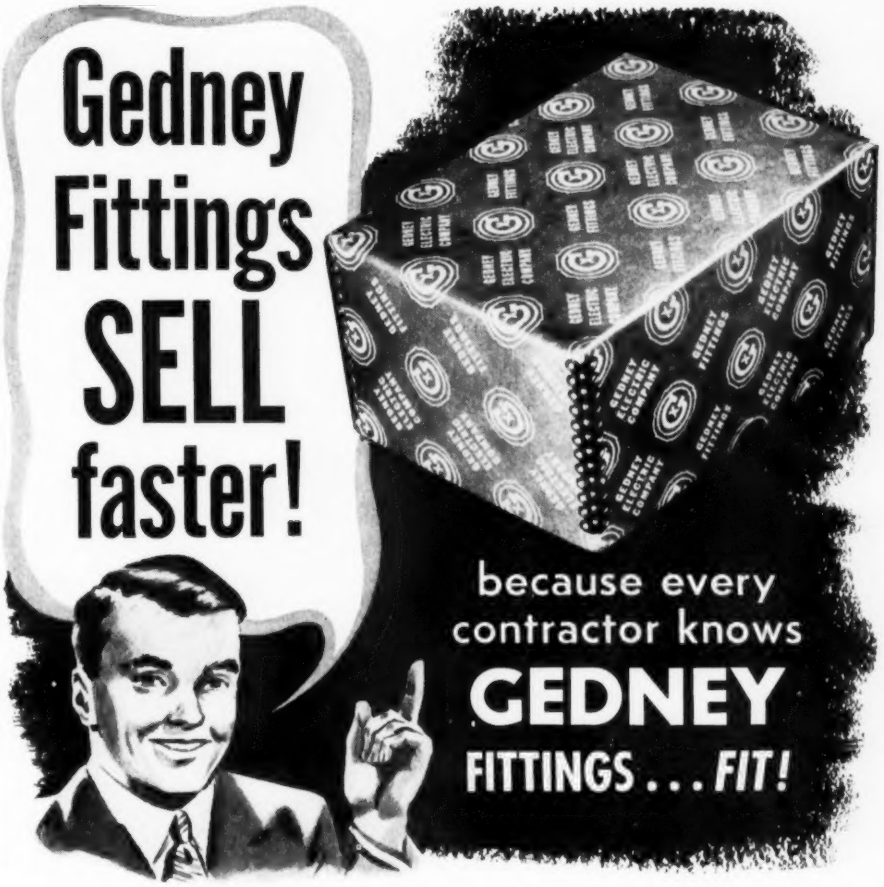
NEW YORK—Eric Hall, manager of the New Jersey division of Westinghouse Electric Supply Company, has been appointed district manager of the Central New York State district for the company. Mr. Hall will succeed H. B. Tompkins, who has resigned.

Prior to his appointment as manager of the New Jersey division, Mr. Hall was appliance manager at the Supply Company's Seattle office, headquarters of the North Pacific district. At the time of his new appointment, Mr. Hall also was serving as president of the Essex Electrical League, Newark, N. J.

E. M. Lacey, formerly district appliance manager at Eastern District headquarters, New York City, has been named to succeed Mr. Hall as manager of the New Jersey division.

C. Stephen Welch, formerly assistant

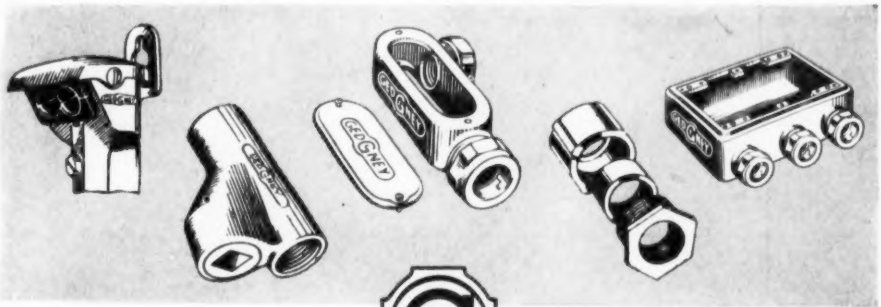
THIRTY YEARS at the helm of the Electrical Supply Co., New Orleans, was recently celebrated by President Leo L. Hirsch. Mr. Hirsch was honored with a testimonial and gift from the firm's 100 employees. One of the founders of the company, Mr. Hirsch became president of the concern in 1917.


Gedney Fittings SELL faster!
because every contractor knows GEDNEY FITTINGS . . . FIT!
GEDNEY ELECTRIC COMPANY
GEDNEY FITTINGS

Not because we tell them so, but because we have built user acceptance for GEDNEY fittings ON THEIR MERITS. This is important to wholesalers seeking stock lines which require little, if any, extra sales effort to move goods. GEDNEY fittings—a complete line, built of high grade malleable iron to exacting standards of design, fabrication, inspection and packaging—have been pre-sold to users in the entire electrical market.

Consistent advertising to the trade in leading magazines . . . complete, easy-to-use catalogs and manuals . . . and modern merchandising combine to form buying attitudes in favor of GEDNEY whenever fittings are considered. Point-of-sale effectiveness is assured by packages imprinted with the familiar all-over GEDNEY trade mark pattern. All packages are labeled for instant identification of contents for the convenience of user and jobber.

If GEDNEY fittings are not yet on your shelves, send for complete literature and information.



SOLD ONLY THRU WHOLESALERS — WRITE FOR NEW CATALOG TODAY

GEDNEY ELECTRIC CO.
FOUNDRY, FACTORY & SHIPPING POINT: TERRYVILLE, CONN.
RKO BLDG., RADIO CITY, NEW YORK 20, N. Y.

Slater

"LIFETIME" WIRING DEVICES

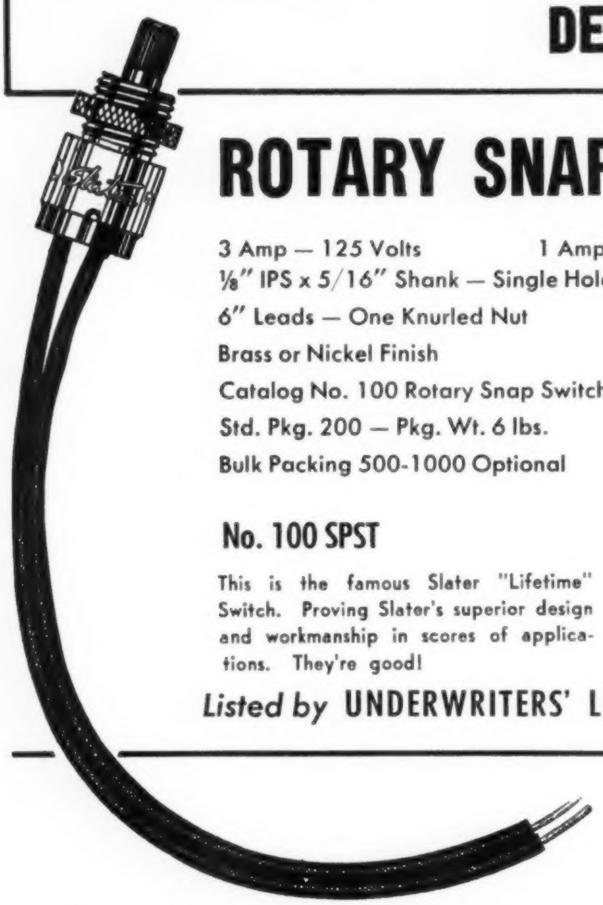
ROTARY SNAP SWITCH

3 Amp — 125 Volts 1 Amp — 250 Volts
⅛" IPS x 5/16" Shank — Single Hole Mounting
6" Leads — One Knurled Nut
Brass or Nickel Finish
Catalog No. 100 Rotary Snap Switch
Std. Pkg. 200 — Pkg. Wt. 6 lbs.
Bulk Packing 500-1000 Optional

No. 100 SPST

This is the famous Slater "Lifetime" Switch. Proving Slater's superior design and workmanship in scores of applications. They're good!

Listed by UNDERWRITERS' LABORATORIES, INC.

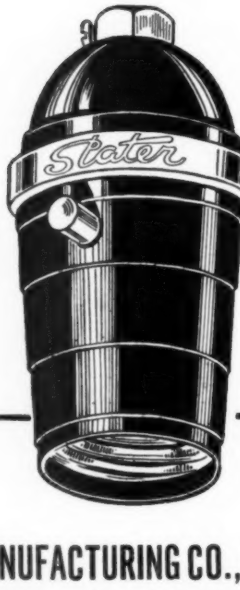


BAKELITE LAMPHOLDER—3 PIECE

Body and Interior — 1 Piece — ⅛" Cap
Metal Interlocking Ring
250 Watts — 250 Volts
Finish: Black — Metal Parts: Polished Nickel

	Std. Pkg.	Pkg. Wt.
Catalog No. 200, Black Bakelite	200	24 lbs.
Catalog Nos. 200-1, Ivory Bakelite	200	24 lbs.

Listed by
UNDERWRITERS' LABORATORIES, INC.



Slater Products are Distributed and Sold Through the Electrical Wholesaler

Slater ELECTRIC & MANUFACTURING CO., Inc.
56th STREET & 37th AVENUE
WOODSIDE, N. Y.

auditor for Wesco at its national headquarters, New York City, has been appointed assistant to David M. Salsbury, executive vice president. W. H. Black from the St. Louis office, has succeeded Mr. Welch as assistant auditor. Mr. Black was a traveling sectional auditor covering several districts before his recent appointment.

Judges Announced For Lighting Show Contest

CHICAGO—Judges for the Merit Awards and twelve $100.00 Gold Seal Awards sponsored by the 2nd International Lighting Exposition and Conference have been announced as follows: Carl Zersen, chairman, manager Chicago Lighting Institute; Marshall Waterman, Electrical Testing Laboratories, Inc.; B. J. Martin, publisher, Electrified Industry magazine; W. T. Stuart, editor, Electrical Contracting; Prof. John O. Kraehenbuehl, University of Illinois.

In making the announcement, Chairman R. W. Staud of the Merit Award Sponsoring Committee said, "These judges are all outstanding in their respective fields and are exceptionally well-qualified to judge the hundreds of reports expected to be entered. In their acceptance of this task, these men have rendered the lighting industry a distinct and valuable service. Furthermore, their names are an additional assurance to every prospective

THE APPOINTMENT of C. B. Stainback as industrial syndicate manager was recently announced by Westinghouse Electric Corp. The position is a new one created to better co-ordinate the industrial sales activities of the company. Mr. Stainback, who was manager of the industrial sales department, has been with Westinghouse since 1910

ELECTRICAL DISTRIBUTORS, Inc., informed our cameraman on a recent visit that it would soon be erecting a new building—two stories, 14,000 sq. ft. Front row, left to right: A. A. Montapert, president; C. A. Baker; Jewell Parker; Helen Hatt; John Lake. Back row: Tom Connelly, treas.; A. B. Montapert, sec.; Donald C. Smith; C. S. Shyrock, vice pres. and sales mgr.; C. LaMay; W. Johnson.

entrant that his entry will be judged by men whose combined experience and technical know-how is a guarantee of complete and competent evaluation of his report."

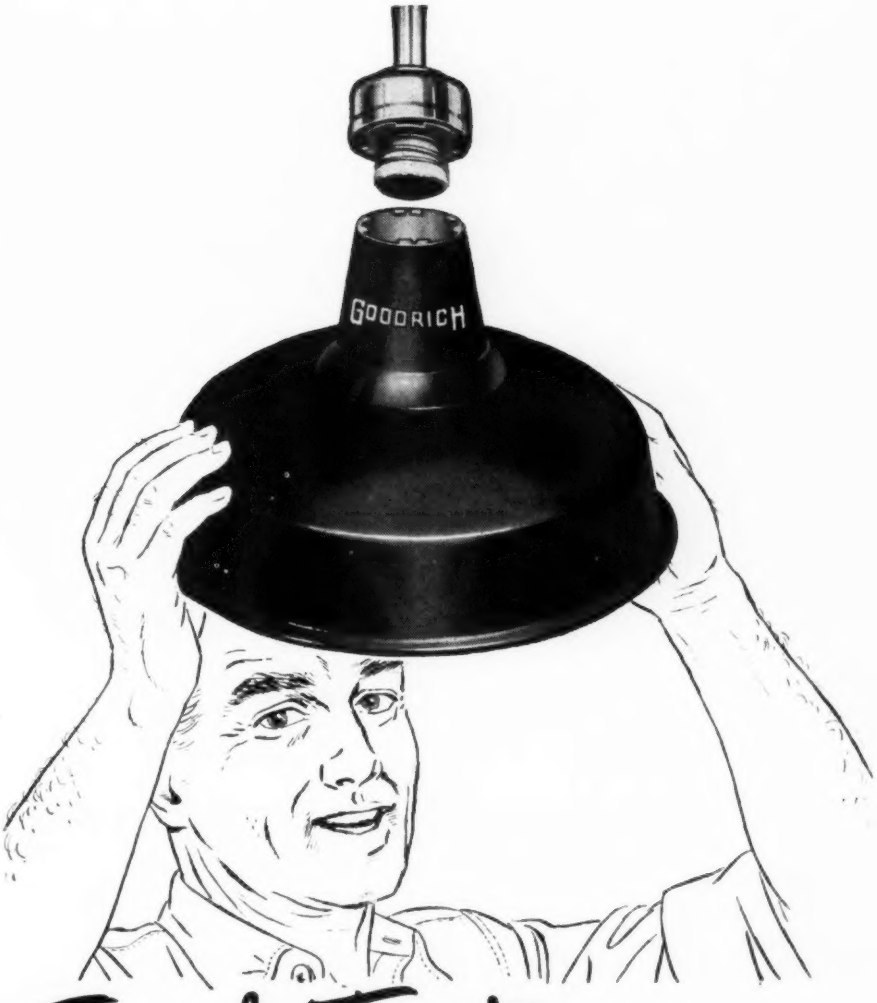
The competition, which is open to electrical contractors, electrical wholesalers, architects, consulting engineers and utility lighting men, is intended to direct industry-wide attention to achievements in "What Planned Lighting Can Do" in industrial and commercial lighting, floodlighting, street lighting, etc. Outstanding entries will be displayed at the Exposition, which is being held next Nov. 3-7, 1947, in the Hotel Stevens, Chicago, under the sponsorship of the Industrial and Commercial Lighting Equipment Section of the National Electrical Manufacturers Association.

New England Wholesaler Increases Sales Staff

BOSTON—George H. Wahn Co., Boston, has increased its sales staff by assigning C. C. Church, R. L. Smith and George M. Farrell to the New England territory. Mr. Church was formerly manager of the Norwood (Mass.) Municipal Electric Light Department, and will cover electric utilities in Massachusetts.

Mr. Smith, recently a lieutenant-colonel in the U. S. Army and formerly connected with the Niagara-Hudson power system and the Stone & Webster Engineering Corp., Boston, will handle sales work in Eastern Massachusetts and Southern New Hampshire.

Mr. Farrell, a veteran of the U. S. Army Engineer Corps and for some time in the electrical contracting business in Boston, will cover the Boston metropolitan area.



Simple Twist...
FOR BETTER LIGHTING

Goodrich Seprable Reflectors

A quarter turn! That's all it takes to attach or remove the Goodrich Seprable Reflector.

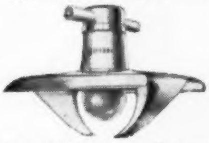
To install, you merely wire the socket and snap it in the hood. Reflectors are attached later. No tools are needed.

They're easier to service, too—with complete "come-apart" construction of hood, socket and reflector. Resilient socket cushions lamp against vibration. And it's replaceable at trifling cost.

Simple? Sure—a twist that saves time and money in both installation and maintenance. Goodrich Seprable Reflectors are available in a wide variety of styles. A few are shown at right.

Emblem Sign Reflectors

Keystone Sign Reflectors



Stocklites for efficient stock room illumination

Sold Through Electrical Wholesalers RLM

GOODRICH
ELECTRIC COMPANY
4600 BELLE PLAINE AVENUE, CHICAGO 41, ILLINOIS

America's finest wholesalers

ROYAL-NOARK *Renewable* FUSES

ROYAL-NOARK *Non-Renewable* FUSES

ROYAL "*Crystal*" the ORIGINAL GLASS-TOP FUSES

sell the ROYAL line to

ROYAL WIRE

ROYAL CHRISTMAS LIGHTING SETS

ROYAL "*Sealed Tight*" TROUBLE LIGHTS

America's finest retailers

ROYAL

WRITE FOR CATALOGS

Quality WIRE • CORD SETS
CARTRIDGE and PLUG FUSES • FUSTATS
TROUBLE LIGHTS • CHRISTMAS LIGHTING SETS

ROYAL ELECTRIC CO., Inc., PAWTUCKET, R. I.

Guth Company Celebrates 45th Anniversary

ST. LOUIS—Now in his 72nd year, Edwin F. Guth, Sr., president of the company bearing his name, along with the organization's employees and friends, will celebrate the 45th anniversary of the company this year.

In 1902 Mr. Guth, Sr. organized his company for the design and manufacture of lighting equipment. Under his direction, the company has grown into a large organization, serving lighting needs nationally and internationally.

Edwin F. Guth, Sr.

The history and growth of the Guth company parallels that of the lighting industry itself. During its 45 years the Edwin F. Guth Company has built many types of lighting equipment, from small Welsbach mantles to architectural cast bronze luminaires weighing a ton or more.

Through almost a half century of pioneering, Mr. Guth, Sr., has contributed much toward the development of the lighting industry. He has designed and manufactured equipment for every type of light source: Gas, nernst lamps, flaming arcs, carbon, gem, tantalum, tungsten, mercury and fluorescent. Mr. Guth, Sr. has been granted over 150 patents on his inventions and improvements in lighting equipment. For his work in lighting, he was named "A Modern Pioneer on the frontier of American Industry" by the National Association of Manufacturers.

In looking back on his half century of lighting, he likes to recall the "good old days" when brass pendants for gas lights were sold for one cent per inch and a three inch plate, pillar, lava tip and cup were thrown in for good measure. Mr. Guth, Sr. is assisted in the business by his two sons, Edwin F. Guth, Jr. and Fred Guth. Both men have been active in the company for 14 years.

New York Wholesalers Guests of Lightolier

NEW YORK—About one hundred metropolitan New York area distributors and members of their staffs recently attended a distributors' meeting of Lightolier, Inc. The New York meeting, which commenced with a dinner at Keen's Chop House, inaugurated a program of regional distributor meetings to be held throughout the country by Lightolier.

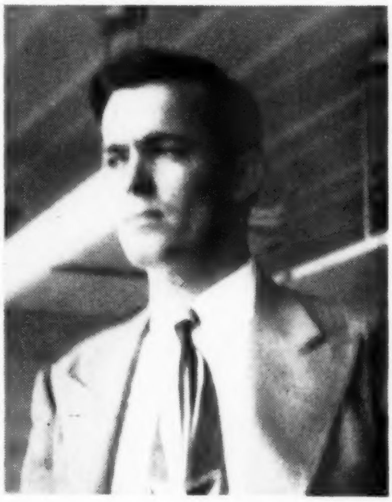
After dinner the guests were taken on a tour of inspection of Lightolier's new showrooms at 11 East 36th Street. Here they were addressed informally by M. D. Blitzer, president; Meyer Lobelson, advertising manager; D. Theodore Berk, district sales manager; Henry Stolnitz; Sid Feltman; Jessie Earlbaum and E. H. R. Blitzer.

The speakers presented to the distributors Lightolier's comprehensive new program of merchandising, display, selling and sales promotion helps.

REA Loans Top 1 Billion, Repaid Ahead of Schedule

WASHINGTON—Two recent bulletins issued by the Rural Electrification Administration announced that loans by the agency have passed the billion dollar mark and that REA borrowers have paid back more than $20,000,000 before the date due.

With the approval of a loan of $145,000 to the Monroe County Electric Coopera-

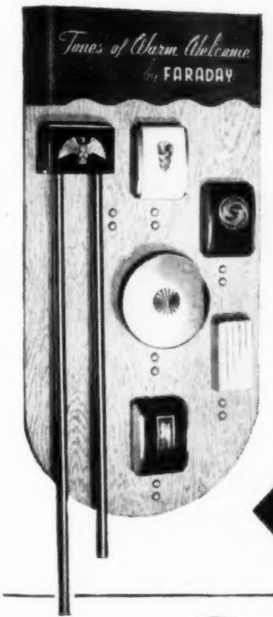


D. S. WIGG, JR., son of D. S. Wigg, secretary of the Los Angeles Wholesale Electric Co., is an outside salesman for the same firm. Mr. Wigg specializes in selling electrical supplies to housing projects.

A winning trio by

FARADAY

NATIONALLY ADVERTISED!
NATIONALLY RECOGNIZED!



FARADAY

SWEET-TONED CHIMES

Your electrical department will take on a new, attractive air when this smart Faraday Chime display goes to work! Complete with six chimes and push buttons, wired and ready to plug in. The Faraday line of eleven models includes both tubular and bar chimes that harmonize with any decorating scheme and suit any pocketbook. All are engineered for positive, trouble-free action. Tubular models have the new, exclusive "tone crown" hangers (all metal—no strings) which assure richer tone and a minimum of swinging.

This beautiful display demonstrates and sells!

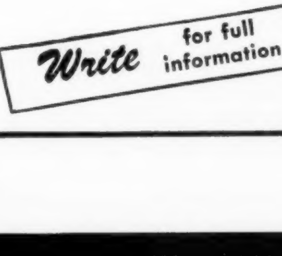
$3.95 and up
FAIR TRADE RETAIL PRICE

FARADAY

Plugmaster

ALL-APPLIANCE CORD SET

Versatile and *profitable,* nothing else like it! Plugmaster fits *all* of your customers' appliances — iron, toaster, waffle baker, coffee maker, etc.— because of its patented self-adjusting plug. Sells on sight because it ends cord worries. Clever, effective Faraday Plugmaster display enables customer to try Plugmaster on nine different type terminals!



FAIR TRADE RETAIL PRICE
$1.39

Write for full information

Broilmaster
REG. U. S. PAT. OFF.

Broilmaster provides the world's easiest method of broiling, as any customer can readily see—plus flavor unmatched by any other method. Fits over any frying pan—no stooping, no greasy broiling oven to clean. Inverted on its own removable base, Broilmaster is also a handy electric grill. Attractive lighted display speeds sales.

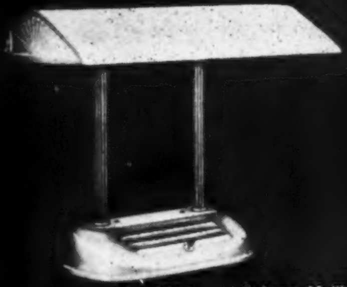
$4.50 Fair Trade Retail Price

FARADAY
ELECTRIC CORPORATION
Adrian, Michigan

SPECIFY Rmc NO GLARE the PROFITABLE line

Yes . . . when you specify *Rmc* desk lamps, kitchen fixtures and bed-lamps . . . you specify fast-moving, profit-making merchandise. Because *Rmc* fluorescent lighting is designed for mass appeal . . . because *Rmc* products have gained high consumer acceptance . . . because *Rmc* products are all guaranteed for satisfaction. You can't go wrong with *Rmc* . . . the guaranteed, the profitable line of portable fluorescent lighting.

SPECIFY RMC... *the* PROFITABLE *line*



No. 1315 1 Lamp 15 Watt
A medium priced, electroplated desk lamp that's breaking records for sales and profits. Also in 1 Lamp, 14 W and 2 Lamps, 15 W.

AVAILABLE ONLY THRU RECOGNIZED JOBBERS
SEND FOR DESCRIPTIVE CATALOG SHEETS TODAY!

AMERICA'S LARGEST MANUFACTURER OF PORTABLE FLUORESCENT LIGHTING . . . PROMOTIONALLY PRICED FOR EVERY PURSE!

RICHTER
METALCRAFT CORP.
160 E. FIRST STREET · MT. VERNON, N. Y.

tive at Waterloo, Illinois, total allocations by the agency since it began in 1935 have reached $1,000,068,389.

According to year-end summary figures of the REA, $107,085,709.42 had fallen due in interest and principal on the loan funds advanced to nearly a thousand borrowers by the end of December, 1946. By that date, the borrowers had made payments of $126,098,601.81, including prepayments of $20,052,590.33. Payments 30 days or more overdue totaled $892,941.14, which is eight-tenths of one percent delinquency, the agency said.

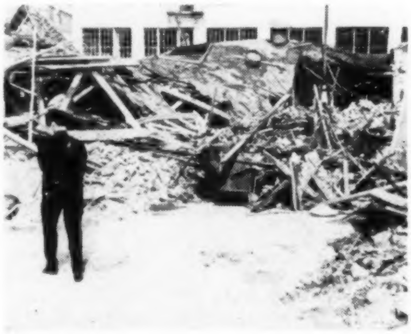
By the end of 1946, REA had advanced loan funds totaling $595,730,269.06. As of the year's end, total repayments of principal amounted to $67,729,229.07 and total interest payments to $58,369,372.74. The loans bear 2 percent interest and are scheduled to be repaid over varying periods, the maximum being 35 years.

Heavy Registration For Lighting Exhibit Space

CHICAGO—"Over 72 lighting equipment, lamp, paint and allied manufacturers are already signed up to exhibit their latest developments for 'Planned Lighting' at the coming 2nd International Lighting Exposition and Conference, sponsored by the Industrial and Commercial Lighting Equipment Section of the National Electrical Manufacturers Association," Chairman E. C. Huerkamp recently stated at an Exposition Operating Committee meeting held in Chicago.

The coming exposition, to be held Nov. 3-7, 1947, at the Stevens Hotel, Chicago, is expected to be larger than the first exposition held last year.

"This initial record number of exhibitors," Mr. Huerkamp said, "assures the



EXPLOSION hits Los Angeles electrical manufacturer. Above is all that was left of the factory of the Firan Company, manufacturers of portable electric heaters, after an explosion in a nearby electro-plating plant. The Firan Company has relocated and is preparing to resume production.

success of the exposition not only from a financial standpoint, but from the viewpoint of all those who will attend the exposition. The interest and enthusiasm shown among exhibitors for this opportunity to meet with and show the developments in the 'Planned Lighting' program to electrical contractors, wholesalers, architects, utility lighting specialists, consulting engineers and electrical engineers of manufacturing and retail establishments is the best possible guarantee to all planning to attend, that the exposition will be an event no one interested in lighting can afford to miss."

LON AND HY KAPLAN (extreme right and left in above photo) are the owners of the Kay Electrical Supply Co., Los Angeles. Lon Kaplan was formerly associated with Sacks Electrical Supply Co., Akron, Ohio. Kay Electrical Supply handles electrical supplies, appliances and lighting equipment.

West Coast Distributor Advertises Via Television

LOS ANGELES—Kinney Brothers, Southern California distributors of television sets, radios and household appliances, recently signed a contract with Los Angeles Television Station KTLA, of Television Products, Inc., a service of Paramount Pictures, Inc.

Afternoon and evening spot announcements will be used five days a week, during which time current Stewart-Warner television models are presented to the public via television.

Ventilating Equipment Mfrs. Elect Officers

Three national associations representing separate groups of manufacturers of ventilating equipment recently held annual meetings and elections of officers.

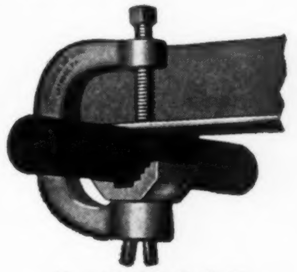
The National Association of Fan Manufacturers held its 30th annual meet-

FULLMAN *Latrobe* PRODUCTS

★ FLOOR BOXES ★ FULLMAN MANUFACTURING CO. QUALITY LATROBE SUPREMACY LATROBE, PA. WIRING SPECIALTIES

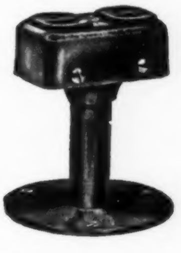
Because of High Performance These Items Rate High Preference

Latrobe Products are quick sellers. There are no "shelf warmers" among them to tie up your capital and cut into your profits. They move off the shelf because they stay put on the job—and that makes everybody happy.



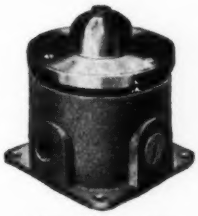
No. 470 "Latrobe" Pipe or Conduit Hanger

Approved for hanging pipe or conduit ½", ¾" and 1" to steel beams up to ⅜" thick. Can be installed quickly.



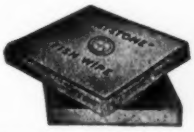
No. 284 Nozzle with No. 200 Cover Plate

Smart Duplex Receptacle Nozzle. Furnished with ½" or ¾" Brass pipe extension. Neat and practical.



No. 150 Box
No. 207 Nozzle

Adjustable and watertight for installation in concrete or wood finished concrete floors. Underwriters approved.

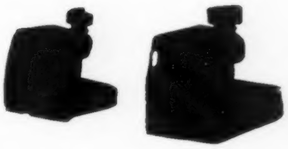


Keystone Fish Wire

Made of high quality flat steel wire. Tempered exactly right. Ten sizes.

"Bull Dog" BX Cable Staples

These high quality staples are packed in cartons, kegs or barrels.



"Bull Dog" Insulator Supports

Clamps of high tensile strength for fastening porcelain or glass insulators to exposed steel framework. Four sizes.

FULLMAN MANUFACTURING CO.
LATROBE . . . PENNSYLVANIA

Extra Rugged . . . Extra Long Life!

Wire with

PORCELAIN

Service-Proved WIREHOLDERS!

Here's another example of better service with PORCELAIN protected wiring! With Porcelain Products Service Wireholders, there's a double advantage: (1) *extra strength* to insure long life of trouble-free service; (2) *neat appearance* on any building. All metal parts are rust-resistant. Designed and built to same standards of quality as high tension insulators. Dependable... utmost satisfaction all along the line—for wholesaler, contractor and consumer. Ask your Electrical Inspector about non-metallic wiring with Porcelain for safety. Write for wiring manual.

ADEQUATE WIRING SERVES AND SAVES

PORCELAIN PRODUCTS, Inc.
FINDLAY, OHIO

Wire Today for Tomorrow's Load

ing at Gulfport, Miss. T. J. Flanagan, president of the Garden City Fan Company, Chicago, Ill., was elected president of the association. G. C. Derry, vice president and general manager, B. F. Sturtevant Company, Boston, Mass., was elected vice president. L. O. Monroe continues as secretary-treasurer.

The twenty-first annual meeting of the Industrial Unit Heater Association was held in New Orleans, Louisiana. R. H. Nelson, president, Herman Nelson Corp., Moline, Ill., was elected president. R. J. Resch, president of McQuay, Inc., Minneapolis, Minn., was elected vice president. L. O. Monroe remains secretary and treasurer.

The Propeller Fan Manufacturers' Association held its eighth annual meeting in New Orleans, La. W. J. Lohman, Jr., treasurer, Chelsea Products, Inc., Irvington, N. J., was elected president. M. L. Aitken, general manager, Propellair, Inc., of Springfield, Ohio, was elected vice president. L. O. Monroe was elected secretary and treasurer.

FM and TV Set Production Rises Sharply in January

WASHINGTON—The Radio Manufacturers Association recently announced that January production of both FM-AM radio receivers and television sets rose sharply over all monthly records in 1946 as the radio industry's total output continued to maintain the high production rate reached in the last quarter of 1946.

The total set production by RMA set manufacturers was 1,564,171 as compared with 1,454,687 in December.

FM-AM sets manufactured in January

SIMPLET ELECTRIC COMPANY

SIMPLET Electric Co. will have greatly increased production capacity at this new plant which it will occupy about May 1st, according to president, A. S. Merrill. The new location at 3600 W. Potomac Ave., Chicago, is a modern one story building and includes additional ground for future expansion.

A NEWCOMER in the electrical wholesaling field in the Los Angeles area is the South Gate Electric Co., at 8936 State St., South Gate, Calif. It was established about the middle of 1946 by Harold L. Smith (right) and Harry F. Hamilton. A new building, which provides 5,000 square feet of floor area, now houses offices and warehouse.

totaled 51,318 as compared with 40,903 in December, while television receivers numbered 5,437 or almost 2,000 above the 3,561 produced in December.

More than 5,000 of the January output of FM-AM receivers were in the low-cost table model field. The remainder were consoles, most of which were radio-phonograph combinations.

Of the television receivers reported, 4,790 were of the radio table model type, the remainder being consoles.

The proportion of all radio consoles to table models rose substantially during January, indicating a greater availability of wooden cabinets.

Consoles accounted for about 10 percent of the January radio output as against a 1946 average of 7 percent, while table models in the same period dropped from a 1946 average of 77 percent to about 64 percent.

Former Wholesaler Is Representative For Watco

CLEVELAND — Watco Engineering, Inc., recently announced the appointment of Ford Reed as Ohio Representative of the firm. Mr. Reed was formerly associated with General Electric Supply Corporation in Pittsburgh, Pa., where he served as district manager of supply sales for the past seven years.

He has had a wide and varied experience in the electrical supply business over the last twenty-five years and has established a manufacturer's representative office at 242 Broadway, Youngstown, Ohio.

Collyer
WIRES & CABLES

COLLYER Wires and Cables speed up installation, outdoors or in . . . they offer every quality for easy working and maximum service.

SERVICE ENTRANCE CABLE

COLLYER Service Entrance Cable, Type SE, Style U, unarmored, with concentrically wound bare neutral, eliminates conduit and is tamper-proof.

- ★ **Flexible and lightweight.**
- ★ **Neat and inconspicuous.**
- ★ **Gray, flame-retardant, weatherproof braid.**

CABLEX (Non-metallic sheathed cable)

COLLYER Cablex Non-Metallic Sheathed Cable, for wiring from meter to outlet, is fast working and uniform. Non-tacky, smooth finish draws through easily. Available in sizes 14 to 4 with 2, 3, or 4 conductors.

- ★ **Smaller diameter, lighter weight.**
- ★ **Collyer Type T Resistol insulated conductors.**
- ★ **Flame-resistant, rugged braid covering.**
- ★ **14/2 and 12/2 in convenient 250 foot cartons.**

Let us know your requirements.

Collyer INSULATED WIRE COMPANY

245 ROOSEVELT AVE., PAWTUCKET, R. I.

The Ten Commandments Of Good Salesmanship

By L. W. Teegarden*

THERE is no magic formula for salesmanship. Nor is it possible to devise a human yardstick for measuring a salesman's capacity. Personalities may differ; one man with an apparently colorless personality will bring in the orders; another man with what must seem to be every qualification, including charm, aggressiveness and brilliance, will fail utterly in getting the name on the dotted line. If there is anything to learn from experience, it is that salesmanship cannot be learned from courses of study alone, and salesmen are hard to pick. Yet, salesmanship can be learned; and salesmen are both born and made.

I KNOW YOUR PRODUCT

The ten commandments of salesmanship begin with the first, which is, "Know Your Product." That really means knowing everything about your company and its policies in terms of effective service to your customer. That does not mean that a man must be a technical genius to know a technical product. It does mean that he should know the full benefits to his customer of everything he has to offer.

II KNOW YOUR CUSTOMER

The second commandment, "Know Your Customer," means more than knowing your prospect well enough to have a drink with him or well enough to call him by his first name. It means knowing his needs and problems, knowing how he can use your product, knowing his human responses in relation to your presentation of the facts about your product. In short, it means a knowledge of human beings, their individual interests, and their reactions at every moment as you present your proposition.

III KNOW YOUR MARKET

The third commandment, "Know Your Market," does not mean merely knowing where to go for prospects and volume. It really means knowing all the ramifications of the market, prospects, potential and competition.

IV BE HONEST—DEAL WITH FACTS

The fourth commandment, "Be Honest—Deal With Facts," is not as self-evident as it seems. Honesty in relation to salesmanship must go clear through to the bone. Honesty means no self-deception and no attempts to distort facts simply to put across a point. Honesty is not only a fundamental to lasting success in selling, but real salesmanship cannot exist without it. There isn't any place in business for a dishonest salesman.

V BE CAREFUL OF COMMITMENTS

The fifth commandment, "Be Careful of Commitments," means to be careful of impulsive statements, overenthusiasm, unauthorized or exaggerated promises. Be sure that you know what you want to accomplish and that you have the authority to commit your company for the thing you promise to do. Then be certain the other fellow clearly understands what you are agreeing to do.

VI KEEP YOUR PROMISES

The sixth commandment, "Keep Your Promises," is not always as easy as it seems. But a man who makes every effort to keep his promises wins in the long run in all his dealings with his fellow men. Not to keep a promise does two things: it lessens the other man's respect for you, and it spells disaster.

VII GET THE ORDER—BUT AT A PROFIT

The seventh commandment is "Get the Order—But at a Profit." This cardinal rule of salesmanship—the ultimate standard by which a salesman must be judged—is his ability to get the order. Get it—but at a Profit! If a salesman chooses to get the order, by taking the line of least resistance, so that the business is unprofitable to his company, he is no salesman. At best, he is an order taker; at worst, a harmful influence — but in either event, no salesman.

VIII WATCH YOUR CONDUCT AND YOUR HEALTH

The eighth commandment is "Watch Your Conduct and Your Health." A man may be circumspect in his conduct — that is, intelligently social in his dealings with other people — yet not be circumspect about his health. Yet, without health, there is nothing. Conduct includes not only social behavior, but also behavior when the guard is down. There is a time and place for everything. Good conduct includes avoidance of entanglements, foolish company — any and all relationships which might clutter up or hinder personal well-being and reputation. Likewise, health must be guarded by avoidance of excess, whether in work or play. It is possible to work too hard and to play too hard, and as a consequence, to lose all the rewards that make life worth living.

IX BE ON THE JOB

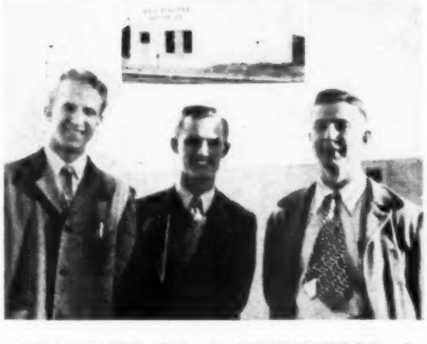
"Be on the Job" is the ninth commandment. This does not mean meticulous attention to starting and quitting time. It means bringing all one's faculties, intelligence, alertness and force to bear at all times on every problem involved in doing the job.

X BE LOYAL—COOPERATE

"Be Loyal — Cooperate" is the tenth commandment. A man who cannot be loyal cannot be honest. Loyalty to one's associates, profession and business ideals presupposes honesty. Loyalty to a company must, like honesty, be a part and parcel of personality. If a man cannot give that kind of loyalty to a company, in any situation in which he finds himself as a company representative, he has no place being there, and there is no place for him, ever. Loyalty, in actual practice, includes the ability to cooperate. Cooperation means more than just "tying-in" with people. It means serving them and their interests as you would have them serve yours. Without the cooperation of others, a man may have great brilliance, great driving power, and yet fail because he has become a lone wolf.

Unselfish cooperation is profitable, for, over the long pull, unselfishness is the basic necessity of healthful survival. Willing cooperation with others is the acid test of character. Real power and real success are achieved in exact proportion as one contributes to the common good. A man's stature is never measured by what he manages to take out of the common effort.

**General Manager, Tube & Equipment Dept., Radio Corp. of America, RCA Victor Division*



"STARTING IN A NUTSHELL"—J. C. Vowels recently established the Main Electric Supply Co. at 6700 S. Main St., Los Angeles. Mr. Vowels was at one time salesman for Westinghouse Electric Supply Co. and more recently with Gaines Electric Supply Co. of Long Beach, Calif. Main Electric Supply Co. has only 600 sq. ft. of floor space, but it's in a brand new building. Left to right: B. V. McComb, salesman; J. C. Vowels, owner; W. G. Vowels, assistant.

Westinghouse Distributors Get Appliance Sales Plans

Plans for the promotion of the new electric appliances made by the Westinghouse Electric Appliance Division are being explained to major distributor salesmen in a series of 20 meetings throughout the country, it was recently reported by T. J. Newcomb, sales manager.

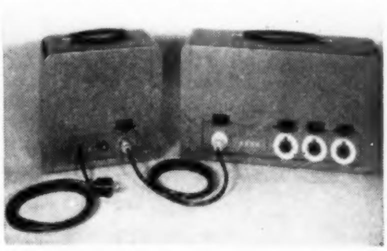
The Westinghouse product, advertising, sales promotion and sales training program for 1947 is being presented during the meetings to the salesmen of major distributors in the seven districts that cover the United States.

More than 750 wholesale salesmen affiliated with the Westinghouse district offices are expected to attend the sales meetings which will be in charge of district managers and sales promotion managers. The meetings, all two-day sessions, have been, or will be held in the following cities: Chicago, Pittsburgh, New York, Los Angeles, St. Paul, Canton, Philadelphia, Atlanta, San Francisco, Boston, Kansas City, Omaha, Columbus, St. Louis, Seattle, Rochester, Milwaukee, Detroit, Dallas and Salt Lake City.

The new appliances that the distributor salesmen will hear about for the first time include the new Two-Temperature refrigerator; three new electric ranges; new upright and tank model vacuum cleaners; the 1947 model Laundromat; a new pop-up toaster; a new featherweight aluminum iron; a new kitchen cabinet line; the garbage disposer; a 40-gallon table top electric water heater; the turnover toaster and other small appliances.

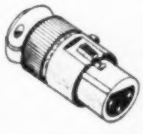
FOR POSITIVE CONNECTIONS connect with Cannon Plugs

Turner "211" Mike with steel shell "XL" plug. Special adapters are required to reconvert these mike receptacles to "XL".



Raytheon's 3-channel Remote Amplifier and power unit uses two types of Cannon Plugs: "X" and "P". Three receptacles on amplifier at right are P3-13.

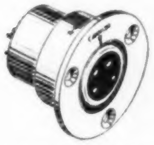
Rear end of RCA modern television monitor and control unit. Four types of Cannon Plugs are used in this unit: "TQ", "P", "K" and "FMRR".
—Don Lee Television photo.



Type XL-3-11SC
($2.80 List)

Type XL-3-50N
($1.30 List)

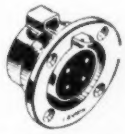
One of three types of adapters made by Cannon Electric for converting microphones over to Cannon "XL" connectors when original plug installation is of another manufacture. The steel shell plugs not only have an integral cable clamp (5/16" Dia.) but are practically unbreakable.



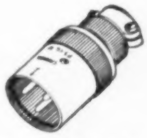
Type X-4-13
($3.25 List)

Type X-3-12
($1.25 List)

The "X" series of light plugs are made in zinc with bright nickel finish and have three available insert arrangements: 1 to 4 contacts for No. 14 and No. 16 wires. Friction-hold coupling. Cable entry 9/32" with gland nut and bushing.



Type P4-13
($4.55 List)



Type P3-CG-12
($2.50 List)

The Type "P" Series has been standard on many types of quality electrical equipment for many years. It includes a wide variety of shell styles in both plugs and receptacles and six different insert arrangements from which to select two to six 30-amp. or eight 15-amp. contacts. Two cable entries 9/32" and 25/32".

The connectors shown above are summarized with list prices in new C146A Condensed Catalog. Write to Dept. D-362 for a copy. Types "P", "X" and "XL" are also available direct from more than 125 leading electrical jobbers.

CANNON ELECTRIC
CANNON ELECTRIC DEVELOPMENT COMPANY
3209 Humboldt Street, Los Angeles 31, California
Canada & British Empire — Cannon Electric Co., Ltd., Toronto, Ontario • World Export Agents (excepting British Empire) Frazar & Hansen, 301 Clay St., San Francisco 11, Calif.

Kleins
for
safety's
sake
KLEIN TOOLS
KLEIN
KLEIN TOOLS
EST. 1857

Linemen are Kleinmen because they know that their very safety depends on the quality of the equipment they use. Klein has been their standard "since 1857."

KLEIN CLIMBERS *assure safe trips up and down the pole. They do not cut out.*

"KLEIN-KORD" RED CENTER SAFETY STRAPS *provide maximum safety—the Red Center unmistakably signals when the strap should be replaced.*

"KLEIN-KORD" TOOL BELTS *give the safety, comfort and convenience needed for fast, efficient work.*

KLEIN PLIERS *with their proper balance, sharp knives and matched jaws help in doing any wiring job better, quicker.*

Be sure to equip your linemen with Klein Pliers and equipment. Your supplier will fill your order as rapidly as possible.

Ask Your Supplier
***Foreign Distributor:* International Standard Electric Corp., New York**

The Klein Pocket Tool Guide showing the Klein line and containing useful tool information will be sent on request.

Since 1857

Mathias KLEIN & Sons
Established 1857
Chicago, Ill., U.S.A.
3200 BELMONT AVENUE, CHICAGO 18, ILLINOIS

PARTNERS in the firm of Joralemon, Craig & Co., Philadelphia, Pa., are L. D. Joralemon (left) and D. K. Craig. The newly established concern will act as manufacturer's representative for Weston Electrical Instrument Corp., American Transformer Co., Western Electro Mechanical Co. and Radio Frequency Laboratories, Inc.

Million and a Half Ranges Made by Hotpoint, Inc.

CHICAGO—The production of electric range number 1,500,000 at Hotpoint, Inc., was recently marked by a brief ceremony at the company's plant in this city.

Since the founder George A. Hughes invented the first commercially sold electric stove and produced it by hand in a garret on Superior Street in 1910, the Chicago company has continuously produced ranges, except for the wartime interruption.

At the ceremony four veteran employees with an aggregate of 150 years of service crated the 1½ millionth range. An official said that one-third of all electric ranges produced by the company had been made at the Chicago plant.

The first electric range was a "converted" oil stove, and was studied with skepticism when shown at an electrical convention in 1910. The exhibit resulted in sufficient orders to encourage Mr. Hughes to organize a company here. After World War I the company had gained a strong enough position to become part of a merger with the General Electric Company.

New Corporation Formed By Merger of Two Mfrs.

Bridgeport Pressed Steel Corporation has been formed recently by the merger of two prominent manufacturers, Bright Light Reflector Co., Inc., of Bridgeport, Conn., and International Appliance Corp. of New York. The two companies have been organized as subsidiaries of Bridgeport Pressed Steel Corporation. The new Corporation will have its plants and offices in Bridgeport, Conn.

Officers of Bridgeport Pressed Steel

Corporation, which will fabricate parts for other concerns as well as producing its own products are Isaac Litner, president; William Litner, vice president and general manager; Leon Litner, secretary and production manager and Philip Litner, treasurer and sales director. Charles E. School will continue as general sales manager of Bright Light Reflector Co. Monte Closter continues as general manager of International Appliance Corporation.

Reports on Electron Tube Sales Planned

NEW YORK—For the first time a complete record of electron tube sales will be made available according to a recent announcement by the Radio Manufacturers Association and the National Electrical Manufacturers Association.

The N.E.M.A. Statistical Department will carry out the joint activity, which covers the sales by manufacturers of all tubes except receiving, X-ray and battery-charging types. Questionnaires will be sent to all members of both trade associations who manufacture electron tubes, as well as to all known tube manufacturers in the industry who do not belong to either association.

The industry-wide sales data will be compiled on a quarterly basis beginning

SAM FRIEDMAN, formerly manager of I. A. Friedman & Co., Philadelphia, went to Los Angeles in 1946 and established the Acme Electrical Supply Co. The company, which is located at 5350 West Washington Blvd., employs five outside salesmen and two counter men.

*VAPORTITE IS JUST THAT...!
UL

The SIMPLET Line of Vaportite Fixtures and Fittings has been carefully designed to permit universal application.

There are 28 types and sizes of fixtures each of which is furnished for either ½" or ¾" conduit. Developed through many years of experience in this specialized field, Vaportites will exceed the most rigid specifications encountered on the toughest of jobs where perfect sealing is essential.

Write today for descriptive information and prices.

SIMPLET ELECTRIC COMPANY

3600 West Potomac Avenue • Chicago 51, Illinois
112 Charlton Street • New York 14, N. Y.

INTER-COMMUNICATION

PROVIDES A **Big** Money Market FOR ELECTRICAL JOBBERS

Let us tell you how Talk-A-Phone, The World's Most Complete Line Of Inter-communication can make you big money *now*. You can quickly prove to your own satisfaction that there *is* big money in Talk-A-Phone Inter-communication for *you* . . . for your *dealers*.

Write today. Just say "Show us" and get the convincing profit-yielding facts. Adress Dept. 1 A.

Talk-A-Phone Co.

1512 S. Pulaski Road Chicago 23, Ill.

BURGESS
2R
RADIO 'A'
BATTERY
...ED BY THEIR STRIPES
BURGESS Portable Radio "A" BATTERIES
BUY THEM BY THE DOZEN
10¢
XX45
'B' BATTERY

HERE'S NEWS!
A New Addition to the Complete
BURGESS LINE
for
Portable Radios

This new battery means more sales and more profits this summer for you and your dealers!

- ★ Made expressly for personal portables!
- ★ Built to give more listening pleasure!
- ★ Packed in bright display packs for dozen-at-a-time sales!
- ★ A BURGESS FIRST for *all* dealers!

Order your stock now! Ask for catalog pages for your salesmen and free order cards for your dealers.

BURGESS NO. 2R "A" BATTERY FOR PERSONAL PORTABLE RADIOS

Handy dozen pack for radio, electrical, drug, hardware, department and sporting goods stores.

Here's the perfect pair for personal portables . . . No. XX45 67½ volt long life "B" and No 2R "A" battery. Be sure your dealers stock these two batteries for the portable season ahead!

REMEMBER—BURGESS IS THE COMPLETE QUALITY LINE

Feature the complete Burgess line. Compare it with any other line of portable radio batteries.

- ★ The Only Complete line of "A", "B" and "A & B" Batteries
- ★ Top Quality Recognized by Millions of Portable Radio Owners
- ★ Bright New Packaging Promotes Sales
- ★ Nationally Advertised in Leading Magazines

STOCK YOUR DEALERS NOW WITH THE COMPLETE BURGESS LINE

BURGESS BATTERY COMPANY
FREEPORT, ILLINOIS

with January 1, 1947. An over-all report also will be prepared for 1946.

The new service embraces these classifications: High vacuum tubes, non-receiving types; gas or vapor tubes, including pool tubes; phototubes, cathode ray and camera pick-up tubes; velocity modulated tubes, magnetrons, gaps and TR boxes; miscellaneous tubes, including voltage regulator, ballast, vacuum capacitors, vacuum switches, vacuum gauge, etc.

Virginia Corp. to Make Electrical Apparatus

Shull Electric Products Corporation has been established in Arlington, Virginia, for the manufacture of electrical distribution and control apparatus. The new corporation has purchased assets of The Shull Company of Washington, D. C., which had been engaged in a similar activity for the past forty years.

A modern, single-story building at 1260 Jefferson Davis Highway in Arlington has been purchased by the company and will be occupied in the near future.

The former president of the Shull Company of Washington, D. C., Frank T. Shull, will serve as president of the new corporation. Other officers and directors will be Thomas S. Shull, who has been associated with his father in the electrical manufacturing business since his graduation from Cornell University, and a new member of the firm, Richard C. Lipps. Mr. Lipps was formerly manager of West Works of the Trumbull Electric Manufacturing Company, Plainville, Conn.

C. T. BAKEMAN is San Francisco factory representative for the F. W. Wakefield Brass Co., Vermilion, Ohio. Mr. Bakeman was formerly director of industrial development for the Puget Sound Power & Light Co. He recently completed a term as regional vice president of the I.E.S.

RECENTLY appointed assistant sales manager of Mitchell Mfg. Co., Chicago is Fred Masterson. Mr. Masterson was formerly with Faries Mfg. Co. and is well known among electrical distributors and contractors

GE Northwestern District Announces Staff Change

J. F. Gogins has been appointed district manager of the industrial division for the General Electric Company's Portland, Ore., apparatus department, J. R. Murphy, Northwestern district manager recently announced.

Formerly manager of the Spokane, Wash., office of the apparatus department, Mr. Gogins was transferred to Portland last fall to become assistant district sales manager. He joined GE in 1930 after graduating from the University of Minnesota.

New York Sales Office Opened by Sola Electric

NEW YORK—Sola Electric Company, Chicago, Illinois, manufacturer of transformers, recently announced the opening of a New York sales office.

The new office, which is located in the Hudson Terminal Building, is staffed with factory-trained personnel and has a direct factory wire service.

New Name For American Transformer Dealer

American Transformer Company, Newark, New Jersey, recently announced that its field representative in the Philadelphia area is now operating under the name of Joralemon, Craig & Company.

The company is located at 112 South 16th Street, Philadelphia, and is a successor to the business formerly conducted by L. D. Joralemon.

Special--Priced to Move

LEAD COVERED
CABLE

NEW—ON ORIGINAL REELS
STANDARD CONSTRUCTION

No. 2 Stranded 3 Conductor • Type RL, 600 Volts
270 Rolls—Approx 500 ft. ea.
6 Rolls—Approx. 1500 ft. ea.

Priced to Sell F.O.B. K.C., Mo. **46¢ FT.** **Quantity Discounts 6 or more reels.**

IMMEDIATE DELIVERY

Write, wire or phone

BROWN-STRAUSS CORP.
Box 78 **PHONE HA. 1000** **Kansas City 10, Mo.**

POWERS VOLTESTER

POWERS VOLTESTER
POWERS VOLTESTER

No. E-112

VOLTAGE RANGE
110 to 550v
AC or DC

This is not a neon lamp but is equipped with a six-watt Mazda lamp that tells you by the brilliancy of the light what voltage you are on. It tells you positively and at a glance—no guesswork.

Metal name plate carries convenient data for figuring average circuit installation.

List Price **$6.60.** WRITE FOR DISTRIBUTOR DISCOUNTS

USE A POWERS VOLTESTER

And Know What You Are Working On
Know If It Is Hot—And If Hot, How Hot

Made By **POWERS MFG. CO.** **1527 FOLSOM STREET SAN FRANCISCO 3, CALIFORNIA**

It's Easy
with
HYDEE HANGER*
$1.65
each list
321
IT'S EASY TO SEE WHEN IT'S
DAY-BRITE
Lighting

Just connect wires, screw to outlet box and your chain suspension fixture is hung – in a few minutes. All it takes is a screwdriver!

Complete with receptacle, two 5-foot chains, "S" hooks and cord clips. Fits standard 4" or 3¼" outlet box or plaster ring. Self-grounding – regular 2-wire cord and plug may be used.

Day--Brite Lighting, Inc., 5405 Bulwer Ave., St. Louis 7, Mo. Nationally distributed through leading electrical supply houses.

In Canada: address all inquiries to Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.

*Patent No. D-141024, others pending. Underwriters approved.

BRIEGEL METHOD 100
NO. 605 ½
B-M
BM41

E·M·T CONNECTIONS IN A FEW SECONDS!

With B. M. Fittings

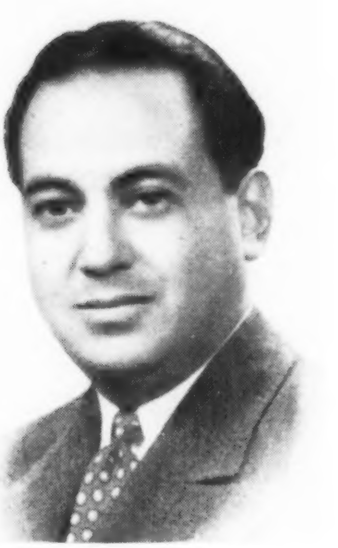
TWO QUICK SQUEEZES give you Finer, Faster Conduit Connections. B-M Fittings do away with the twisting, turning and tightening of nuts and save you valuable time and materials. Then too, they are stronger, neater and much easier to work with in tight places. Start using B-M Fittings today. Have more satisfied customers—more profits from each job!

(All B-M Fittings carry the Underwriters Seal of Approval)

DISTRIBUTED BY

The M. B. Austin Co., Chicago, Ill
Clayton Mark & Co., Evanston, Ill.
Clifton Conduit Co., Jersey Cy., N. J.
Gen. Electric Co., Bridgeport, Conn.
The Steelduct Co., Youngstown, Ohio
Enameled Metals, Pittsburgh, Penn.
National Enameling & Mfg. Co., Pittsburgh, Pa
Triangle Conduit & Cable Co., New Brunswick, N. J.

BM BRIEGEL METHOD TOOL CO. • Galva, Ill.



MORTON J. OLSCHWANG has been appointed to head operations in the Chicago area for the Globe Lighting Products Co., New York. Mr. Olschwang has been identified with the lighting industry for many years and has served in engineering capacities with Kay Electric and Franklin Electric of Atlantic City, N. J., West Phila. Electric Supply Co. and for the past six years with Lightolier Co. of Chicago.

Baunach Named Sales Manager Of Swartzbaugh

TOLEDO, OHIO—The Swartzbaugh Manufacturing Company of this city recently announced that Roy J. Baunach has been appointed sales manager to succeed the late Jason B. Swartzbaugh.

Mr. Baunach, who joined the company in 1935, has been manager in charge of sales and engineering for the Ideal Food Conveyor Division and for the past six months has been assistant sales manager for Everhot Products.

M. M. Dunbar Joins Staff Of General Day-Lite Co.

M. M. Dunbar, formerly executive vice president and member of the board of directors of Lighting Products, Inc., recently joined the staff of General Day-Lite Company, Norristown, Pa., as general sales manager and director of lighting fixture design and advertising.

Mr. Dunbar was associated with Lighting Products, Inc., for the past nine years where he was in charge of design, sales promotion and advertising. His long experience in the lighting industry, together with his many associations, will tie in with General Day-Lite's expansion program, the company said.

He has retained a sponsoring membership in the Illuminating Engineering Society, is affiliated with the N.E.M.A., the Nebraska-Iowa Electric Association, and is a registered professional engineer in the State of Illinois. He is also a member of the Artists' Guild, Inc., and the Electric Association of Chicago.

RMA Survey to Gather FM Production Figures

WASHINGTON—In a move to obtain accurate information on current and estimated production of FM-AM receivers and transmitters during 1947, the Radio Manufacturers Association recently sent out questionnaires to all set manufacturers who are members of RMA asking for detailed information on production of FM-AM receivers.

It is expected that the RMA survey will produce the first definite forecasts of future FM set production and accurate estimates of the number of FM transmitters that will be available this year.

Estimates of radio industry leaders as to 1947 production of FM-AM receivers have varied widely from 2,000,000 to 5,000,000. Current production by RMA member-companies is running between 10,000 and 15,000 a week. January's output of FM-AM sets by RMA manufacturers was 51,318.

THIS AND THAT

Record Rail Shipments

Rail shipments in 1946 topped all records in history, according to the Railway Express Agency. Some 233,520,508 express shipments were handled during the year. December, 1946 was the heaviest month with 22½ million shipments

Fewer Headaches

That writer's cramp from filling out blanks, reports, survey forms and questionnaires on your business for the U. S. Government will not be so severe this year. Only 4000 reports will be required from business establishments this year—as against 6200 during the war.

Strike Statistics

The strike at the Allis-Chalmers Manufacturing Co., which lasted 329 days, cost an estimated $85,000,000. Employees lost $20,000,000 in wages, the Nation $65,000,000 in urgently needed materials. Ballots cast by union members when the

"Accwire"
INSULATED
WIRE AND
CABLES

RUBBER COVERED WIRES & CORDS
ACCURATE
SIZE
COLOR
FEET
TYPE
INSULATED WIRE CORP.
NEW HAVEN, CONN.

- Rubber and Synthetic Cords and Cables in a wide range of sizes, stranding and conductors.
- Cotton and Rayon Braided Wire for all general flexible cord applications.
- Special Cables and Portable Cords.
- *Cord Assemblies—standard and to specification for all types of Electrical Appliances.*
- The right cord for each job.
- Send for Sample Card . . . inspect 14 different "Accwire" Cords and judge quality for yourself.

THE ACCURATE INSULATED WIRE CORP.

Manufacturers of Quality Wire for a Quarter of a Century

28 FOX STREET • NEW HAVEN, CONN.

MURDOCK BUZZERS and PUSH BUTTONS Sell Fast!

LIST PRICE
$1.00 each
No. 46

Dealers everywhere report fast sales on these specialties. MURDOCK'S No-contact Tone-right Buzzer attracts favorable attention because of its modern louver-design. Buzzer is fully insulated and produces a pleasing, uniform tone. It's guaranteed for years of trouble-free service. Choice of colors in attractive moulded cases. Operates on 6 to 8 voles, A.C. only. 3½"x1⅝"x1¼" deep.

PUSH BUTTONS OF DISTINCTION

Model No. 10 (illustrated). Durable moulded case. Positive contacts. Rustproof, insulated. 1⅝"x1⅛"x⅞". List $.30 each. Name plate model No. 11 same construction, but has removable metal escutcheon. 3¼"x1⅛"x⅞". List $.40 each.

Murdock Representatives

ATLANTA: L. Morris Landers Co. • **BOSTON:** Electrical Agencies, Inc. • **CLEVELAND:** Henger-Fairfield Co. • **CHICAGO:** George Butler Co. • **DALLAS:** George E. Anderson Co. • **DETROIT:** Hemphill & Co. • **LOS ANGELES:** Keeler, White Co. • **NEW YORK:** Telephone Sales & Service Corp. • **PHILADELPHIA:** Harry G. Anschuetz • **PORTLAND, ORE.:** Keeler, White Co. • **SAN FRANCISCO:** Keeler, White Co. • **SEATTLE:** Keeler, White Co. • **ST. LOUIS:** W. T. Koch Co. • **UTICA:** F. Walter Laver • **EXPORT DIVISION**—Rocke International Corporation, 13 East 40th Street, New York 16, New York.

WM. J. MURDOCK CO.

235 Carter St. Chelsea 50, Mass.

Sell this Profitable Line

of DEPENDABLE SOLDERING EQUIPMENT

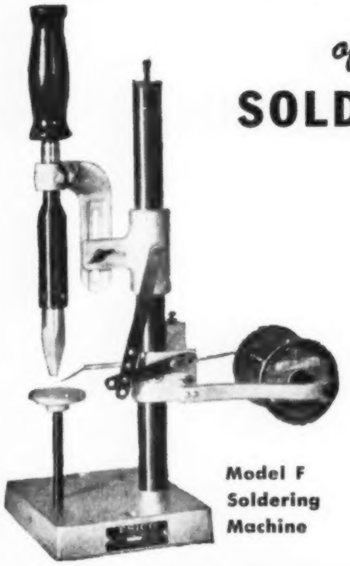
Here is a line covering everything needed for the modern plant which calls for Electric Soldering Equipment.

Factories clamor for it, when once called to their attention, for it's a FAST-MOVING LINE.

Dependably, substantially built, securing customer-good-will, and resales.

Includes Electric Soldering Irons listing from $5 to $12.25; Soldering Machines $7.50 to $15; Soldering Iron Temperature Control Stands, and other related specialties.

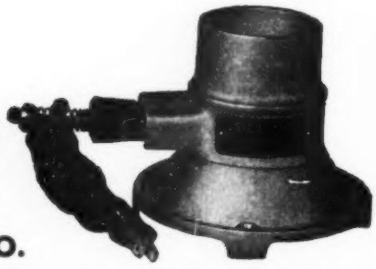
Our products are generally sold by the wholesalers direct to the industrials. Write for catalogs, price lists and Wholesalers' and Retail Discounts.



Model F Soldering Machine

ESICO ★Reg. U.S. Pat. Off.

ELECTRIC SOLDERING IRON CO.
3047 W. Elm St. Deep River, Conn.



Model 12 Solder Pot

UNIVERSAL QUALITY makes Wiring Jobs "Stand Up"

THE UNIVERSAL CLAY PRODUCTS CO.
1549 EAST FIRST STREET SANDUSKY, OHIO
U TRADE MARK

strike vote was taken totaled 8,342. Ballots cast to end the strike numbered 1,100. It is impossible to estimate the amount of private property damage and injuries to innocent citizens that occurred during the bitter conflict. Sixty-one policemen and deputies were injured trying to quell outbursts of violence; 151 persons were arrested.

Meetings

National Housewares Show will be held April 27 to May 2 in Convention Hall, Philadelphia, Pa.

National Electronic Equipment Show has been scheduled for May 13-16 at the Hotel Stevens, Chicago, Ill.

Mid-America Exposition to be held at the Public Auditorium in Cleveland, Ohio, May 22-31.

Edison Electric Institute holds its annual meeting at the Hotel Traymore, Atlantic City, N. J., June 2-5.

Radio Manufacturers Association will hold its annual convention at the Hotel Stevens, Chicago, Ill., June 10-13.

OBITUARIES

C. H. Kelley

Charles H. Kelley, former vice president in charge of purchases for Rumsey Electric Company of Philadelphia, died very suddenly March 4, 1947.

Mr. Kelley was born in Yarmouth, Nova Scotia. Prior to joining the Rumsey wholesaling organization in 1907, Mr. Kelley was associated with the H. C. Roberts Electric Supply Company.

He joined the Rumsey firm as a salesman and after years of service became vice president in charge of purchases.

He retired from active duty July 1, 1944. Since his retirement he spent some time in Florida and at Ocean City, New Jersey, while his permanent home was in Haddonfield, New Jersey.

Mr. Kelley is survived by his wife, Elaine B. Kelley, his daughter, Ada Pickell, and several grandchildren.

J. W. Scott

John W. Scott, star salesman for Van Cleef Brothers, Chicago, died at St. Louis, Mo., February 24, 1947.

Mr. Scott joined Van Cleef Brothers on November 1, 1921 and served the firm continuously from that date until his death. He was well known in the electrical industry and had many good friends among the wholesalers in his territory.

As a salesman for Van Cleef Broth-

FEATURE . . . NALCO

NALCO PRODUCTS

Candylbeme and Candle Flame Lamps

For Beautifying Lighting Fixtures

CARBON LAMPS

HEAVY DUTY for Pilot Light and other Industrial Uses

OIL LAMP ADAPTERS

For Electrifying Oil Lamps

INFRA-RED LAMPS

Self-reflecting — Clear Glass

DRI-THERM INFRA-RED

Strip and Portable Units

PHOTOGRAPHIC DARK ROOM LAMPS

For All Dark Room Work

Illustrated literature sent on request.

NORTH AMERICAN
Electric Lamp Co.
1034 TYLER ST. ST. LOUIS 6, MO.

ILSCO OPERATES ITS OWN TUBE MILL

ILSCO LUGS AND CONNECTORS

Simplicity

IN DESIGN AND CONSTRUCTION

FEWER parts, more skillful engineering design and construction, easy, swift installation . . . and copper 99.99% pure . . . 100% conductive . . . just a few reasons why you should "go Ilsco for '47."

Write for 48-page illustrated catalog.

ILSCO COPPER TUBE & PRODUCTS, Inc
CINCINNATI, OHIO

ers Mr. Scott traveled a large territory in the Midwest including the States of Upper Michigan, Minnesota, North Dakota, South Dakota, Wisconsin, Nebraska, Kansas, Missouri, Arkansas and Oklahoma.

J. J. Wilson

J. J. Wilson, Seattle Branch Manager of John A. Roebling's Sons Company, died March 6, 1947.

Mr. Wilson was born in Lawrence, Kansas, 59 years ago and moved to Seattle in 1905. He was widely known in the mining and logging industries as a wire rope engineer. It was in this capacity that he began his association with the Roebling Company in February, 1920.

J. J. Wilson

Mr. Wilson was a member of Thomas M. Reed Lodge No. 225, F. & A. M., and was a 32nd degree Scottish Rite Mason; a member of Nile Temple of the shrine, Port Angeles Naval Lodge B.P.O.E., No. 353, the Washington Athletic Club, Rotary International, the Seattle Chamber of Commerce and Associated General Contractors of America.

Surviving are his widow, Bernice, of Seattle and a daughter, Mrs. Edrei Sauble, Arcata, California.

ASSOCIATION NEWS

BALTIMORE—The Electrical Manufacturers Representatives Association, Inc., of Baltimore has recently sent to each of its members and jobbers a copy of the 1947 Directory of Association members and the lines they represent. A total of 147 lines are represented by the 61 members in this directory.

Donald F. Parker, recently appointed secretary of the Association for 1947, has resigned from office. Replacing Mr. Parker as secretary is R. A. Haworth.

COLD CATHODE LIGHTING INFORMATION

FOR LIGHTING SALESMEN CONTRACTORS ARCHITECTS ENGINEERS

Let this technical data and printed material help you to specify and sell *Better and More Dependable* lighting installations.

For commercial or industrial installations

*COLOVOLT

Cold Cathode Low Voltage Lighting offers these extra advantages

- Longer lamp life . . . one year guaranteed
- Lower maintenance cost per foot candle of light
- Minimum interruption of important production jobs
- Instantaneous starting without troublesome starters
- Engineered for individual or line lighting

Write for Illustrated Material and Technical Data today!

SEE OUR CATALOG IN SWEET'S

Architectural and Engineering Files for 1947

*Trade Mark Registered U.S. Pat. Off.

GENERAL LUMINESCENT CORP.
648 S. FEDERAL STREET • CHICAGO 5, ILLINOIS

SELL TRICO with confidence

TRICO

No other line offers the "plus-values" incorporated in TRICO PRODUCTS — quality that pays off in steady repeat business.

Play up TRICO PRODUCTS on all calls. Well advertised and backed up by a nationally famous trade mark—guaranteed profits.

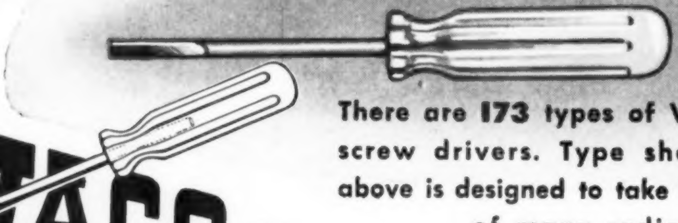
- RENEWABLE FUSES
- ONE-TIME FUSES
- KLIPLOK CLAMPS
- FUSE PULLERS
- AUTOMATIC OILERS
- AIR GUNS

SOLD THRU WHOLESALERS
WRITE FOR YOUR FREE CATALOG TODAY

TRICO FUSE MFG. CO.
MILWAUKEE 12, WISCONSIN

Quality you can see in VACO screw drivers

These transparent Amberyl plastic handles tell their story at a glance . . . break-proof strength, shock-proof safety . . . shafts and bits of the finest steel alloy, treated to insure lasting dependability on every type of job.



There are 173 types of Vaco screw drivers. Type shown above is designed to take care of many radio requirements.

VACO PRODUCTS CO. 317 E. ONTARIO ST. CHICAGO 11, ILL.
CANADIAN WAREHOUSE: 560 KING STREET WEST · TORONTO 2, ONT.

WRITE FOR CATALOG

CHICAGO—Members of the West Suburban Electric League of Chicago met at the Old Prague Inn on March 27 for dinner to discuss reports of standing committees, items of current business and new subjects of interest to the League.

Lighting Lecture and Laboratory Course

A combination lecture and laboratory course on lighting sponsored by the Chicago Lighting Institute, Illinois Institute of Technology, and the Chicago Section of the Illuminating Engineering Society will be held during April, May and June of this year. Tuition fee is $20.00 per student, per course.

Robert Ligare will lecture every Monday from 6:30 to 8:30 p.m. at the Chicago Lighting Institute on "Illumination Fundamentals Course"—12 lectures in all. R. R. Lusk will lecture every Thursday from 6:30 to 8:30 p.m. at the Chicago Lighting Institute on "Lighting Design Problems Course"—12 lectures. Arthur Sandburg and L. J. Cahill instruct every other Wednesday from 6:30 to 9:30 p.m. at the Illinois Institute of Technology's Laboratory on the "Lighting Design Problems Course"—12 sessions. Don Ingwersen and Anton A. Sobolik instruct every other Wednesday and Thursday from 6:30 to 9:30 at the Illinois Institute of Technology's laboratory on "Illumination Fundamentals Course"—12 sessions.

Col. Heimbrodt Addressed Chicago E.M.E.

Members of Electrical Maintenance Engineers of the Chicago Electric Association held their March Dinner-Meeting at Vogel's Restaurant, where they heard former member Col. Carl E. Heimbrodt, present "The War and the Proving Ground"—a word picture of the responsibilities and duties of an Army Post Engineer. Detailed to the Corps of Engineers and assigned as Post Engineer at the Aberdeen Proving Grounds, he had a most interesting and eventful experience. He told about the wide variety of work necessary to repair and maintain the utilities and real property of a community

FACTORY REPRESENTATIVES

wanted by established manufacturer of non-metallic cable connectors, with a huge production-capacity. Excellent prospects; protected territories open in South, Southwest and West. See our full page ad on page 144 of this issue. State qualifications in letter.

TOMIC SALES & ENGINEERING CO.
4864 Woodward Ave.
Detroit 1, Mich.

A PERFECT TOOL...

America's Only Soldering Iron with BUILT-IN THERMOSTAT

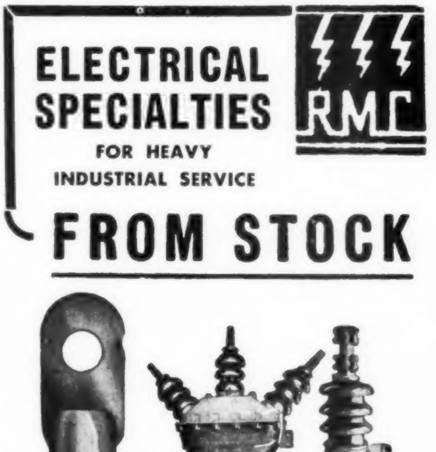
Sell KWIKHEAT Thermostatic Soldering Irons for profits and repeat sales. They give customers solid, satisfying performance and long useful life. Two KWIKHEAT built-in Thermostatic irons, 225-watt and 450-watt...and the low cost KOPPER-KORE 100-watt iron. The Kordless KWIKHEAT speeds up production of delicate work. Write for information on KWIKHEAT'S nation-wide merchandising program. It means real profits to you.

HOT IN 90 SECONDS

0 45 90

VANATTA KWIKHEAT THERMOSTATIC SOLDERING IRON

DIVISION - SOUND EQUIPMENT CORP. of CALIF. GLENDALE 4, CALIF.



ELECTRICAL SPECIALTIES FOR HEAVY INDUSTRIAL SERVICE FROM STOCK

RMC

Soldering Lug

3-Conductor Angle Pothead

Single Conductor Pothead

Write for a complete selection of RUSGREEN bulletins

ENDULATORS (POTHEADS) ALL SIZES • ALL SHAPES • ALL VOLTAGES • ALL TYPES • BUS SUPPORTS • SPLICING KITS AND MATERIALS • INSULATING COMPOUNDS

★ ★ ★

RUSGREEN MFG. CO.
14260 Birwood Avenue • Detroit, Mich.

of 40,000 population, including a railroad and a fire department, all devoted exclusively to the making of war.

DETROIT—The Annual Minstrel Show and Dance of the Electrical Association of Detroit was held March 13 and 14 with capacity attendance on both nights.

Progress of the Adequate Wiring Program, as outlined by Burr H. Allen in the Electrogram, shows the staunch support given the program in the Detroit area by all interested groups. A continuing activity of publicity is now being run on the Adequate Wiring Certification plan.

KANSAS CITY—Members of the Electric Association of Kansas City enjoyed the color movie "Railroadin" at the March 11 meeting in the Aztec Room of the Hotel President. Produced by the American Locomotive Company and the General Electric Company, this 30-minute film tells the story of railroad expansion from the early times to the present-day streamliners.

MINNEAPOLIS—Big event of the month for the North Central Electrical Industries was the Electrical Trade Convention sponsored by the association at Duluth, March 16 through 18. A record-breaking attendance heard industry leaders present highly interesting and informative papers on all important phases of the electrical industry.

Opening meeting was the Central Station Conference held at 7:30 p.m. on Sunday, March 16 with A. H. Jaeger of Hotpoint presenting the story on bottle-gas competition and followed by the "Go-All-Electric" campaign of the Na-

MANUFACTURERS' REPRESENTATIVES WANTED

by a manufacturing concern that has been established 25 years. A complete flexible cord line is offered including lamp cord, heater cord, rubber sheathed portable cord, etc., also standard cord sets and cord assemblies manufactured to customer specifications. Apply to

Box 41, Electrical Wholesaling
330 W. 42nd St.
New York 18, N. Y.

SIGNAL FANS Designed and Built for Long Life...

FANS

VENT FANS

EXHAUST FANS

SIGNAL ELECTRIC MFG. CO.
MENOMINEE, MICHIGAN

SIGNAL

Power Circuit Transformers!

TRANSFORMER
DONGAN ELECTRIC MFG. CO.

Capacities up to 37½ KVA, single and 3 phase.

The most economical way of providing low voltage circuits for the lighting and operating of machine tools is to run a branch line from the power line, using a transformer to step down the voltage.

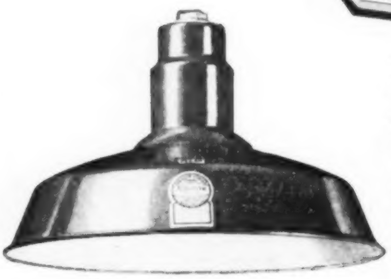
Dongan Transformers are being used for this purpose in industrial plants throughout the nation, reducing installation time and also conserving critical materials.

DONGAN ELECTRIC MFG. CO.
2989 Franklin Detroit 7, Mich.

DONGAN
TRANSFORMERS
The Dongan Line Since Nineteen-Nine

We Invite Inquiries

QUALITY and PERFORMANCE GUARANTEED
TO MEET ABOLITE RLM STANDARDS



FORMED NECK RLM DOME TYPE REFLECTORS
Porcelain-on-Steel

Finest quality, durable and efficient for all industrial lighting. ABolite reflectors are also made in Easy Detachable, Threaded Neck and Separable Socket types.

The RLM label on an ABolite reflector signifies that it conforms with all the rigid specifications set by RLM Standards Institute, of which Jones Metal is a member.

New plant improvements, including another continuous furnace of latest design, are now under construction. Increased production will make Jones your most dependable source of supply for porcelain-on-steel lighting reflectors.

You can depend on the "Old Reliable" ABolite . . . sold exclusively through wholesalers.

Light right with . . ABolite REFLECTORS PORCELAIN ON STEEL

THE JONES METAL PRODUCTS CO., West Lafayette, Ohio

tional Electrical Manufacturers Association.

On Monday, March 17, the 1947 Electrical Code Meeting was held with members of the Minnesota Electrical Association attending and participating in a panel discussion of the code. In the afternoon a merchandising meeting, sponsored by North Central Electrical Industries was held and included a presentation on electric water heater merchandising and the "Adequate Wiring Certification Program" of the National Adequate Wiring Bureau.

Electrical wholesaler and distributor members of North Central Electrical Industries played hosts at a "Hospitality Hour" from 5 to 6 p.m. on Monday.

The All-Industry Lighting meeting was held on Monday evening and George Spurbeck, commercial sales manager of Minnesota Light and Power Co., was chairman of the meeting, which covered street and highway lighting, recreation and airport lighting and quality in lighting fixtures. H. S. Walker of the General Electric Co., showed outstanding lighting installations in the area and electrical contractors who made any of the installations shown received complimentary tickets to the banquet.

The Minnesota Electrical Council held their 15th annual meeting on Tuesday followed in the afternoon by a meeting

AT IT SINCE '98 ALLEN

FLUXES
FOR SODERING
BRAZING
WELDING

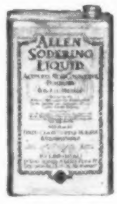
GOOD PROFIT ITEMS

ALLEN SODERING SALT

SODERING SALT

← All around flux in powder form . . . soders all metals but aluminum . . . takes quick bits and holds . . . non acid . . . packed in metal or glass container.

Standard Formula . . . for all metals . . . 17,000 pounds to the square inch with no gumming, fumes, or corrosion. Use ALLEN Special Formula for Stainless Steel and Aluminum. →



LIQUID SODERING

ALLEN SODERING PASTE

SODERING PASTE

← Standard Formula . . . fast working, corrosion free, soft form of flux . . . adheres to surface while you soder . . . makes soder self fluxing. Underwriter Approved.

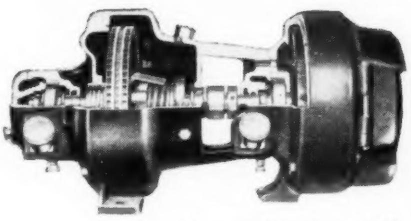
Cleans and brightens sodering copper . . . outlives fibrous lumps . . . does not crumble or corrode metal work or tools on the job. →

SOLID SAL AMMONIAC

FLUXES for SODERING
"SEND FOR FREE SODERING CHART"

L. B. ALLEN CO., Inc.
6701 BRYN MAWR AVE.
CHICAGO 31, ILL.

COMPACT,
SELF REGULATING
Steam Turbo-Generators



Cross section view K-240
500 watt turbo-generator

Pyle-National steam turbo-generators, built in a range of capacities from 500 watts to 12 kw., provide dependable emergency light and power, or auxiliary service anywhere there is a steam supply. These units are compact and easily installed, and are self-regulating, requiring only opening the steam valve to start. They carry full rated load on steam pressures from 125 lbs. to 300 lbs. per sq. in. Fluctuation in load and variations in steam pressure have no appreciable effect upon voltage. Accurate governor action prevents waste of steam under light load.

Turbines—Pyle-National steam turbines also available from 1/4 to 120 hp. for any auxiliary power service. Write for turbo-generator bulletin 4110.

1897 • FIFTIETH ANNIVERSARY • 1947

THE PYLE-NATIONAL COMPANY
1352 N. Kostner Avenue, Chicago 51, Illinois

devoted to rural electrical equipment. A. S. Dunning of Motor Power Equipment Company was master of ceremonies at the evening banquet and Deloss Walker, nationally known economist, was the guest speaker.

MORE FACTS ON PRODUCTS

Adjustable Lighting Fixtures—A four-page bulletin, No. 47, illustrates and describes adjustable lighting fixtures for wall, bench, ceiling and conduit mounting; and portable types for desks, benches and floor. The O. C. White Co., 21 Herman St., Worcester, Mass.

When writing mention ELECTRICAL WHOLESALING

Electrical Tools—Catalog No. 1 contains thirty-two pages of illustrations, descriptions and specification data on the line of electrical tools manufactured by the Aristo Power Tools, Inc., 601 West Washington Blvd., Chicago 6, Ill. Some

AEMCO Automatic
TIME SWITCHES
of precision
• Synchronous
• Manually Wound

Stock Models from 1100 to 4950 Watts per pole.

CHECK THE *Automatic* LINE

For any load . . . for every installation, there is an Automatic Time Switch to meet the most rigid specification. Compact, ruggedly constructed *Automatic* Switches have pure silver contacts . . . tamper proof cabinets with visible dial . . . 2 to 24 "on" and "off" operations. For dependable automatic time switches specify *Automatic*.

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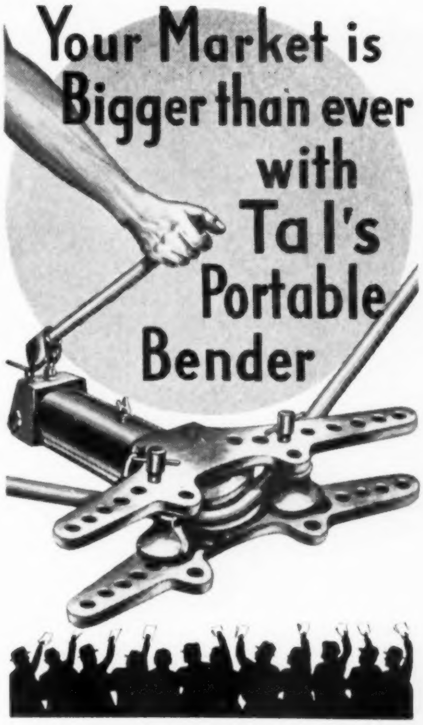
Automatic Electric MFG. CO.
56 STATE ST., MANKATO, MINNESOTA



Your Market is Bigger than ever with Tal's Portable Bender

• Get behind this best-engineered tool that is setting new performance records in bending conduit.

Hundreds of contractors have set new standards on all types of construction jobs, lowered their costs, gained valuable time with this great conduit bender . . . for a Tal machine bends cold, bends true, bends conduit to any radius up to **90°** in one single, uninterrupted operation. There is no need to waste time by replacing the conduit three to six times.

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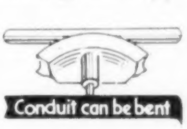

40°
to any desired angle

60°
without moving pipe

90°
in one operation

TAL Prestal Bender, Inc.
Electrical Division Milwaukee 2, Wis.

An Amazingly Convenient New Kit of

Wedge-Grip Connectors

Contains Total of 55 Connectors

Master Electrician's Sherman "Wedge-Grip" SERVICE KIT
Wedge-Grip
Saves Time-Cuts Costs
Made by H. B. SHERMAN MFG. CO. Battle Creek, Mich
SHERMAN

"WEDGE-GRIP" KITS

The Connector of A Hundred Uses

The Wedge-Grip is a splendid connector for fixtures, junction boxes, service entrance, outlet boxes, small and large motors, electric ranges, etc.

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Order a stock of these new Wedge-Grip Kits today!

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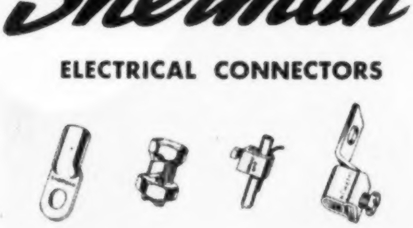
ELECTRICAL CONNECTORS



of the tools listed in the catalog are the power drills, bench drill stands, jigger saws, bench grinders, buffers and polishers, air guns and blowers.

When writing mention ELECTRICAL WHOLESALING

Electronic Radio Tubes—Two booklets on money-making suggestions that aid the dealer to sell more radio tubes have been issued by GE and Ken-Rad. The booklets contain illustrations of cardboard window displays, newspaper ads, penny postcards, blotters, wall plaques, price cards, counter cards, stationery, shipping labels, repair stickers, and job tickets. General Electric Co., Syracuse, N. Y.

When writing mention ELECTRICAL WHOLESALING

Fluorescent and Incandescent Lighting Equipment—Catalog No. 44-A has been revised to include the latest improvements and new additions to the line of fluorescent and incandescent lighting equipment made by The Edwin F. Guth Co., 2615 Washington, St. Louis, Mo. The new catalog contains useful information on lighting design, and light-engineering data with details and specifications on the products listed.

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TORK CLOCKS

For all types of electrical switching and time control, Tork Time Clocks will control operations efficiently and automatically. Self-starting, all-electric. A variety of models; for minutes, hours, days, or weeks. Plain or Astronomic Dials.

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WEEKLY CALENDAR WHEEL: Optional feature on all standard models provides for automatically skipping one or more days each week.

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RELAYS AND CONTACTORS • SPRING-DRIVEN MODELS • CAM OPERATED TIMERS • CLOCKS FOR SPORTS AND GAMES • SELECTOR WHEELS • TIME DELAY CIRCUITS • FREEZ-ALARM FOR REFRIGERATION PROTECTION

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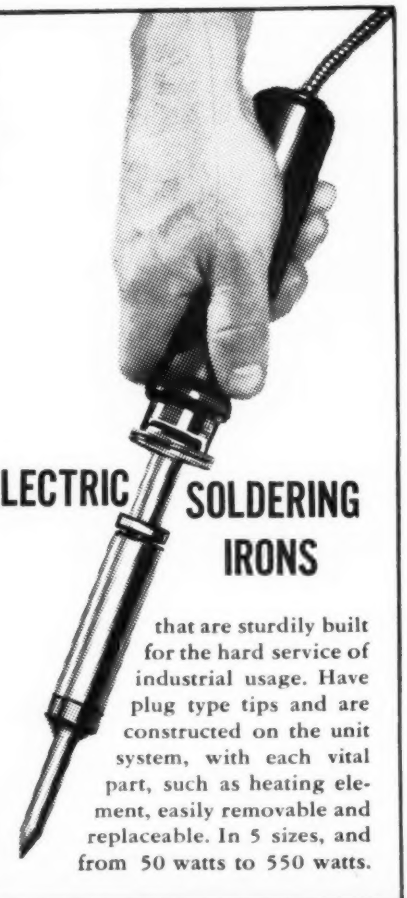

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that are sturdily built for the hard service of industrial usage. Have plug type tips and are constructed on the unit system, with each vital part, such as heating element, easily removable and replaceable. In 5 sizes, and from 50 watts to 550 watts.

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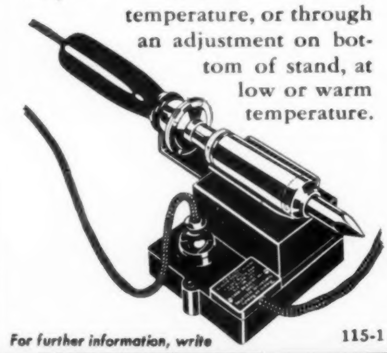
This is a thermostatically controlled device for the regulation of the temperature of an electric soldering iron. When placed on and connected to this stand, iron may be maintained at working temperature, or through an adjustment on bottom of stand, at low or warm temperature.



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115-1

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is tough!

Bronco has what it takes to meet your toughest requirements. You can be sure of maximum performance —with Bronco.

WESTERN
INSULATED WIRE CO.
1001 E. Sixty-Second St.
Los Angeles 1, California

Electric Bathroom Heater—A Bulletin, published by the Thermador Electrical Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif., describes the mechanical features of the company's built-in electric head to heel-type bathroom heater.

When writing mention ELECTRICAL WHOLESALING

Hot or Cold Cathode Fluorescent Fixtures—An 8-page folder illustrates and describes fluorescent fixtures using the hot cathode "slimline" lamps or the cold cathode "hairpinline" lamps manufactured by Illuminating Engineering Co., 2347 E. Nine Mile Road, Hazel Park, Michigan.

When writing mention ELECTRICAL WHOLESALING

FM Antenna—The Andrew type "1200" folded quadrupole antenna is described in Bulletin 46 published by the Andrew Co., 363 East 75th Streeet, Chicago, Illinois. The bulletin included a horizontal radiation pattern, a schematic diagram, principal dimensions, characteristics and prices of the antenna and its accessories.

When writing mention ELECTRICAL WHOLESALING

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by the same specialists in electric heating who make VULCAN Electric Soldering Tools.

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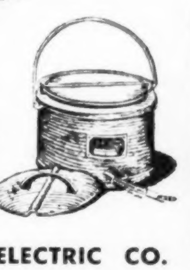

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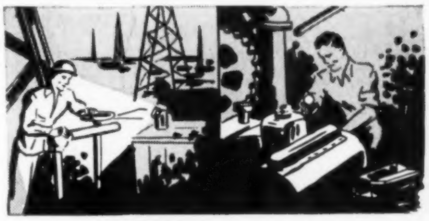
That's Justrite For All Purposes



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MODEL NO. 17-S
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Model No. 17-S

List price $3.85 each. With Honeycomb Lens $4.00 each.

YOU can get immediate delivery on this Justrite Flashlight No. 17-S that's safety-approved by Underwriters' Laboratories, Inc., and U. S. Bureau of Mines. It's a sturdily built light that fits in palm of hand, stands on base or attaches to belt with clip. Plastic case is guaranteed unbreakable against ordinary usage. Look for the Safety Approvals and be sure it's JUSTRITE.

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2063 N. Southport Ave., Dept. A-4, Chicago 14, Ill.

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Pendant or bracket types, for 3" and 4" outlet box or "x" Type mounting. With or without wire guard and reflector. 50 to 300 W.

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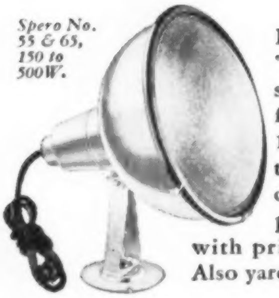

Spero No. 55 & 65, 150 to 500W.

Finishes in "Duralum"—sizes for lamps from 150 to 1500 W. Open types or outdoor weatherproof type with prismatic lens. Also yard lights.

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Shallow and dome-type, one-piece seamless construction, keyless or with pull chain. For 25 to 750 W lamps.

Dome type for 60 to 200 W lamps.

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Die-Cast Sockets with approved porcelains are just one of the items we manufacture for use in electrical construction.

Vertical or 90° angle mounting.

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SPERO also manufactures more than 30 types and sizes of fluorescent units.

Spero products are distributed only through recognized wholesalers. Write for Bulletin No. 10.

THE SPERO ELECTRIC CORPORATION
18222 Lanken Ave., Cleveland 19, O.

Footcandle Selector—A vest pocket footcandle selector which indicates lighting recommendations for homes, stores, offices, schools, and industry has been printed by General Electric's Lamp Department, Nela Park, Cleveland. Price 10 cents.

When writing mention ELECTRICAL WHOLESALING

Incandescent and Fluorescent Fixtures—Data sheets, describing the line of outside colonial type lanterns, spot and floodlighting units, and flush fluorescent troffers are published by McCabe Lighting Corp., 172 Newbury St., Boston 16, Mass.

When writing mention ELECTRICAL WHOLESALING

Jacks—Catalog J-46 lists hand jacks up to 100-ton capacities, gauge-equipped jacks and wheeled floor jacks. Blackhawk Mfg. Co., Milwaukee 1, Wis.

When writing mention ELECTRICAL WHOLESALING

Motors for Pumps—An 8-page folder (GEA-4645) graphically illustrates with pictures and diagrams the line of streamline Triclad motors for deep-well turbine pumps and other applications that are manufactured by the General Electric Co.,

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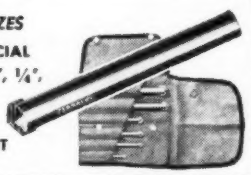
ASK ABOUT SPECIAL 6-DRILL SET, 3/16", 1/4", 5/16", 3/8", 1/2" AND 5/8", IN FREE CANVAS KIT



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Fast, Efficient, Economical
WIRE CONNECTORS

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EASY TO USE . .
1. STRIP WIRE ENDS
2. SCREW IT
3. THAT'S IT—WITH SCRU-ITS!

Four sizes for joining many combinations of AWG solid and/or stranded wires.

WRITE TODAY FOR
DATA SHEET
No. B-4

It contains complete specifications on SCRU-IT sizes, dimensions, uses, etc.

101 USES . . Here Are a Few!

- Fixtures
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- Fuse Boxes
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- Switch Controls
- Motor Connections

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PUROZONE COMPANY
3254 Lincoln Ave. Chicago 13, Ill.

Schenectady, N. Y. The folder includes characteristics data, maintenance and installation methods, and explains the mechanical features of the motors.

When writing mention **ELECTRICAL WHOLESALING**

Receiving Tubes—A 378 page technical manual on radio receiving tubes contains basic application data for 545 types of radio receiving tubes, characteristic curves, resistance coupled amplifier data, interchangeable tube charts, connections for standard RMA internal and external shields, typical receiver and amplifier circuits, definitions of common radio terms, and instruction on the use of characteristic curves. Sylvania Electric Products, Inc., Emporium, Pa.

When writing mention **ELECTRICAL WHOLESALING**

Renewable Fuses—A 3-color catalog, illustrating and describing the "time delay" renewable fuses and renewal links, has been published by Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, Ill. The catalog shows both the knife blade and ferrule type fuses and contains data on sizes available. "Time delay" curves for both 250 and 600 volt fuses are also illustrated.

When writing mention **ELECTRICAL WHOLESALING**

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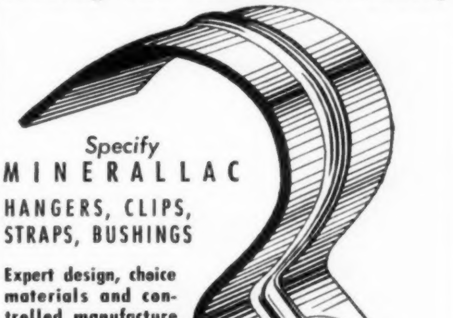
JIFFY CLIPS
Serving the Electrical Industry



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IT'S NEW
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THESE FEATURES...

- P&S Porcelain Socket Interior.
- Die-cast Metal Shell — Baked-on Aluminum Spray Finish.
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3/4 Inch
EXTRA ADHESIVE
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EXTRA ADHESIVE

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CANTON, MASS

Show your customers how

Fusetrons reduce heating in panelboards and switches and prevent needless blowing of fuses—

Switches and panelboards stay cooler with Fusetrons—because Fusetrons have very much less resistance than ordinary fuses. Since heat produced by the flow of current is proportional to resistance—Fusetrons generate very much less heat than ordinary fuses.

This cooler operation means the elimination of needless blows and useless shutdowns that are the result of heating in fuses.

Cooler operation also adds to the life of switches and panelboards.

Here's Proof—

We have a battery of several electric furnaces, with automatic controls cutting in and out frequently. When each furnace circuit was protected by a 100 ampere renewable fuse, we averaged one fuse outage weekly on each unit. The fuses were running very hot even though extreme care was exercised to maintain clean clips and good contact, with periodical checkups.

"On May 8, 1945, our chief electrician installed 100 ampere Fusetrons in these circuits. In the first three months after that, not one blew. As this electrician puts it, 'I can now go home at night without that continual fear that I'll be called up in the middle of the night to make a fuse replacement on one of those furnace circuits, something that used to happen entirely too often.' Our manager is naturally pleased by the elimination of those furnace shutdowns every week, each one involving the possible loss of the contents of the furnace, and always resulting in high priced labor standing around waiting for burned out fuses to be replaced.

PERCY CHARLTON, Superintendent
Quality Aluminum Casting Company
Waukesha, Wisconsin

Fusetrons give many kinds of protection heretofore not available

Fusetrons do everything fuses do—PLUS much, much more . . .

- Entirely wipe out needless blows caused by motor starting currents or other harmless overloads.
- Give thermal protection to panelboards and switches.
- Prevent needless blows caused by heating in panelboards and switches.
- Permit use of larger motor or adding more motors without installing larger panel or switch.
- On new installations, proper size panels or switches can be installed instead of oversize.
- Protect motors against burnout.
- Give double protection to large motors.
- Provide simplest way to stop motor burnouts from single phasing.
- Make burnout protection of small motors simple and inexpensive.
- Protect coils, transformers and solenoids against burnouts.

For a complete sales story see the BUSS Bulletin

To get complete information on BUSS Fusetrons turn to the BUSS Bulletin in your binder. Here you will find facts about Fusetrons presented in a way that will help you close sales.

Don't forget, too, that the BUSS Fuseman in your territory is always glad to help you close sales or supply you with information on Fusetrons or any other BUSS products.

Bussmann Mfg. Co., St. Louis
Division McGraw Electric Company

BUSS FUSETRONS